



Illinois
Hist. Survey

UNIVERSITY OF ILLINOIS STUDIES

IN THE

SOCIAL SCIENCES

VOL. 4, NOS. 3 AND 4

SEPTEMBER - DECEMBER, 1915

BOARD OF EDITORS

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PUBLISHED BY THE UNIVERSITY OF ILLINOIS
UNDER THE AUSPICES OF THE GRADUATE SCHOOL
URBANA, ILLINOIS

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JOHNSON REPRINT CORPORATION
111 Fifth Avenue, New York, N.Y. 10003

JOHNSON REPRINT COMPANY LIMITED
Berkeley Square House, London, W. 1

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First reprinting, 1967, Johnson Reprint Corporation

Printed in the United States of America

1967

History of the Illinois Central Railroad to 1870

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INTRODUCTION.

The following study was submitted in 1909 as a thesis in partial fulfillment of the requirements for the doctor's degree of the Graduate School of the University of Illinois. Since that date the "University of Illinois Studies in the Social Sciences" have been established as a medium of publication for monographs prepared by members of the faculty or graduate students, and it seemed desirable that Dr. Brownson's *History of the Illinois Central to 1870* should be included in this series. The study was originally planned on a more ambitious scale as a complete history of this important railroad system, and the choice now presented itself of asking the author to carry out his first intention or of printing the thesis as it was submitted. The latter alternative was preferred as the history of the first twenty years covered fully the early development of the charter lines and was of sufficient interest and value to justify publication without further delay. When the work was edited for publication, however, it was found necessary to omit some of the matter included in the thesis as originally submitted and also to make some textual changes, both of which have been approved by the author. Among the items omitted may be mentioned an elaborate series of traffic charts prepared in connection with chapter V, of financial charts and tables for chapter VI, David A. Neal's Report on Traffic, and the correspondence of Breese and Douglas relative to the claims made by each for the credit of the land grant. These may all be found in the original thesis, which is on file in the University Library.

It is believed that the monograph as printed contains a substantial contribution not merely to the history of a particular railroad system, but also to the economic history of the country. Called into existence to meet the exigent demand of the growing population of the interior sections of the state for adequate transportation to market their surplus products, the Illinois Central Railroad was built in 1850, after several

failures, to connect the rich agricultural region of central Illinois with the historic, and as it seemed the natural, market in the lower Mississippi valley. But the industrial development of Europe and of the states on the north Atlantic seaboard created a demand for agricultural products which diverted the traffic of the road from the lower South and directed it to Chicago and the East, a movement which was emphasized but not occasioned by the Civil War. How well the road met these changing demands and how it developed during these early and trying years of its history are here clearly told by Dr. Brownson.

Acknowledgments may properly be made to the officials of the Illinois Central Railroad for cooperation with the author in the preparation of this monograph, especially to Mr. Stuyvesant Fish, then president of the road, for the loan of original material and for personal assistance, and to Mr. L. C. Fritch; to the libraries mentioned in the bibliography for the use of their facilities and for various courtesies; and finally to Professor E. R. Dewsnup of the University of Illinois for his advice and assistance in the writing of the thesis.

E. L. BOGART.

University of Illinois
December 1, 1915.

CHAPTER I.

ILLINOIS IN 1850.

It has been said that a history of the Illinois Central Railroad is a history of Illinois. The project for a railroad through the center of Illinois was one of the first propositions for internal improvement in the West. Its construction between 1851 and 1857 opened up to settlers the rich interior counties of the state; and, when completed, it connected these agricultural counties with the remainder of the country, and made Illinois an essential part of the economic system of the United States.

The building of the Illinois Central Railroad and its subsequent growth was the natural result of economic and social conditions in the Middle-West which made necessary such a system of internal transportation. A glance at the map shows that, while Illinois is practically encircled by natural waterways, the interior of the state, which is by far the most fertile portion, is without natural means of transportation.¹ Such counties as Coles, McLean, Macon, and Champaign were, before the introduction of the railroad, almost entirely isolated.

In the early history of Illinois, various attempts had been made to provide a comprehensive system of internal transportation, but the results were of slight importance. The most successful of such undertakings was the Illinois and Michigan Canal from Chicago to La Salle. It was commenced about 1820, but financial difficulties prevented its completion until 1848. The canal was the most fortunate of all the enterprises started by the state, and for a number of years it was of great value. Nevertheless it served only a limited area; its capacity prevented the use of large and economical canal boats; frequent breaks in the masonry or at the locks made navigation difficult even during the summer months; and, finally, ice rendered the canal useless during the winter season.²

¹The territory tributary to parts of the Kankakee and Illinois rivers is an exception, but the size of this territory is comparatively small.

²*Chicago Daily Democrat*, 1849-1851; references in Davidson and Stuve, *A Complete History of Illinois*, under Illinois-Michigan Canal; cf. Moses, *Illinois Historical and Statistical*, references in index to Illinois-Michigan Canal.

The Legislature, as well as private citizens, had made many efforts to supplement the Canal with a system of railroads. As early as 1837, the General Assembly had planned an extensive system of internal improvements, and, without accurate surveys or estimates, ten million dollars were appropriated to build twelve hundred miles of railroad, deepen the rivers of the state, and provide numerous turnpikes. Millions were borrowed, and expended with a lavish hand, but mismanagement, corruption, and the exhaustion of public credit at a time when all financial undertakings were paralyzed by the panic of 1837, brought the state to the verge of bankruptcy. A few surveys, a hundred miles of half completed railway embankment, and one poorly constructed railroad, utterly useless for traffic, were the results of this chimerical experiment.³

Private construction of railroads was somewhat more successful. In the center of the state, the old Springfield and Meredosia Railroad, from Springfield to Jacksonville, constructed by the state in 1837, had been entirely rebuilt by private parties, under the name of the Springfield and Sangamon. In the north, the Galena and Chicago Union project had been revived, and the railroad extended to a point about twenty miles west of Chicago.⁴ These lines at their best gave service of but one freight and one passenger train a day, and the few thousand tons of wheat and merchandise carried by them was a mere bagatelle, compared with the enormous quantities of freight transported from the neighboring counties a few years later. Schedule time was slow, and actual time was even slower. Rates were too high and service too poor to satisfy the necessities of even the adjoining territory.⁵

Aside from the few rivers, the lakes, the canal, and the two short railroads, local transportation did not exist. Words are lacking to describe properly the wretched condition of Illinois highways in 1850. There were a few old corduroy roads and three or four government turnpikes, but they were short and ill-kept. Elsewhere former Indian trails or newly made section roads were the only semblances of highways that existed. In summer these roads were little better than the surrounding prairies, often worse; in winter they were mere mud holes. For-

³Newton, *Early Illinois Railway Legislation*, Chap. iv. Mr. Newton gives a bibliography on the subject, which may be used for further reading. Cf. Moses, *Illinois Historical and Statistical*, references in index to Internal Improvement Act.

⁴Newton, *Railway Legislation in Illinois, 1828 to 1870*, pp. 29 ff.

⁵*Ibid.*; cf. *Chicago Daily Democrat*, 1849, 1850.

fortunate, indeed, was the traveller who was not compelled to help pry the coach out of the deep mud or wait until morning for a yoke of oxen to pull him out of some worse than ordinary slough. Mails were often delayed, and, during the winter storms and spring rains, farm houses, and even large towns were completely isolated. Moreover, the state had shown itself utterly unable to remedy these evils. The statute books were filled with enactments declaring certain trails or mud roads public turn-pikes, but even a sovereign state cannot legislate a mud hole into a turnpike. Charters, almost without number, were granted to private corporations, but without tangible results of any importance.⁶ Local enterprise was equally fruitless, and the efforts of the counties to improve the public roads had generally failed.

The absence of good transportation facilities greatly retarded the economic development of central Illinois. The cost of carrying freight over ordinary country roads or even on well-built highways, under the most favorable circumstances, is very great.⁷ On such roads as existed in Illinois in 1850 the expense of moving heavy freight for any distance was practically prohibitive, and ten to twenty miles was as far as grain or other bulky goods could be hauled with any degree of profit. As nearly all the products of the interior counties of Illinois consisted of articles of small value compared with their bulk, an extensive network of railroads, or canals, was necessary to the proper economic development of the state. Instead of such a system of internal transportation, Illinois had less than a hundred and fifty miles of railroads and canals, and all portions of the state more than ten to twenty miles back from the railroads, the canal, the lake, and the rivers were practically isolated. A farmer living in the interior of the state could carry only a small part of his crop of wheat or corn to market to be exchanged for "store goods", and the total amount of grain received at Chicago, St. Louis, Peoria, and other centers which came from the central counties was insignificant.

The interior counties of Illinois, as stated above, were the most fertile parts of the state, and their isolation had a retarding influence on the economic development of the commonwealth.

⁶*Session Laws of Illinois, 1837-1850.*

⁷The cost of carrying a ton of freight from Buffalo to New York was \$100 by wagon, or about 20c per ton per mile. (Bogart, *Economic History of the United States*, p. 191). This was over good roads and the cost per ton per mile for carrying grain in Illinois must have averaged considerably more.

The earliest settlements in Illinois were made by the French at Cahokia and Kaskaskia near the Mississippi River, and until the end of the third decade nearly all subsequent settlements were also near the banks of the Ohio, the Mississippi, and Illinois rivers, and especially in the southern counties. At that time the majority of the population were immigrants or descendants of immigrants from Kentucky, Tennessee, and other parts of the South.⁸ Then from 1830 to 1850 there occurred a heavy immigration into the northern and central counties, but most of these new settlers were from the eastern states or Europe.⁹ By 1850 Illinois had a population of eight hundred and fifty thousand, and three fourths of the inhabitants were living north of Vandalia and were of northern or European stock.¹⁰ Furthermore, despite the absence of good transportation, three hundred and seventy five thousand people were in the thirty six counties which possessed neither a canal, a river nor a railroad, and the number living more than ten miles from such means of communication must have been considerably larger.¹¹ But this population was only a fraction of what could be supported in the same counties when railroads and good turnpikes were introduced.

As the great bulk of the population in 1850 was engaged in agriculture, the inadequate system for transportation of farm products had a depressing influence on that occupation which in turn affected all other industries of the commonwealth. Farmers living near the waterways and railroads found good markets for their produce, but those not so favorably situated shipped little grain or meat outside the state. Only slight cultivation of the rich prairie soil was necessary to produce abundant crops, and the immediate needs of the farmer and his family were easily

⁸Sixth Census (1840); Greene, *Government of Illinois*, p. 26; cf. various addresses of Mr. C. W. Alvord, of the University of Illinois, on this subject in publications of the Illinois State Historical Library.

⁹Eighth Census (1860).

¹⁰Seventh Census (1850), pp. 117, 118. The thirty counties south of Vandalia had a population of 219,863; the sixty-nine counties north of Vandalia had 631,607. The foreign born population was as follows: England, 18,628; Scotland, 4,661; Wales, 572; Ireland, 27,786; British America, 10,699; Germany, 38,446; total, 110,593. Native born of foreign parentage, not given.

¹¹*Ibid.* The thirty-six counties not crossed by the Illinois-Michigan Canal, the Galena and Chicago Union and Springfield and Sangamon railroads, and the Illinois, Ohio, and Mississippi rivers, had a population of 375,529 in 1850, or 44.1% of the total population.

supplied. Labor saving farm machinery was not in general use, and the work of gathering the crops had to be performed by hand; farm labor was scarce and commanded high wages. As a result, there was little incentive to raise large crops, while the large amount of physical work involved made it impossible for the farmer to plant or gather more than a moderate yield. Shiftless methods of farming were the natural consequence and only a small portion of the arable land was under cultivation. Out of a total area of thirty five million acres, slightly over three million were planted in the five staples, wheat, corn, oats, rye, and potatoes.¹² One third of the entire area, or eleven and a half million acres, was still unoccupied government land,¹³ and much of the remainder had never been broken by the plough.¹⁴ The yield per acre was much less than could be expected from the almost virgin soil of the prairies.¹⁵ Cultivation of fruit and vegetables was neglected, and three quarters of a million dollars would be an ample estimate of the value of all the orchard and market crops of the state.¹⁶ The production of the three leading grains, wheat, corn, and oats, was, of course, large, but corn and oats constituted eighty-eight per cent of the yield of these three crops, as against twelve per cent for wheat. However, they were so bulky compared with their value at market that the entire production of both corn and oats was of little importance, except for use on the farm.¹⁷ In general, prices were high, but the excessive cost of transportation and the great expense of gathering the crops, resulting from poor methods of farming, gave the farmer only a meagre profit.¹⁸

Perhaps the most profitable form of agriculture at that time was the raising of live stock, especially swine. Through stock trains and refrigerator cars did not exist, and all meat had to be salted or pickled on or near the farm. This seriously restricted the raising of cattle and sheep, but did not affect the pork business, which enjoyed a period of prosperity seldom

¹²Letter of Rantoul, *Documents Relating to the Organization of the Illinois Central Railroad*.

¹³*Ibid.*; Seventh Census (1850), p. 730.

¹⁴Seventh Census (1850), p. 730.

¹⁵Compendium U. S. Census, 1850, p. 170. Average yield in bushels per acre was: wheat, 11; rye, 14; corn, 33; oats, 29; barley, 40.

¹⁶*Ibid.*

¹⁷The cost of hauling a bushel of wheat was no greater than the cost of hauling a bushel of corn, and yet the price of the former averaged about three times that of the latter.

¹⁸Cf. Chap. v.

equalled. Over two million swine were on the various farms and something like a million were slaughtered each year.¹⁹ A large part of the corn crop was used for feeding cattle or hogs, and was thus sent to the market on "the hoof".²⁰

Mining was affected by lack of cheap transportation to an even greater extent than agriculture. In 1850 coal was mined in all parts of the state, especially in the Danville, La Salle, Springfield, and Du Quoin districts. The mines at Danville, Du Quoin, and Springfield had been in operation for a comparatively short time and were of only local importance.²¹ The La Salle field, being located on the Illinois and Michigan Canal, and thus possessing comparatively good transportation facilities, was the most important district in the state. However, it was handicapped by the high cost of mining, which was about one dollar per ton more than in the Ohio mines. This prevented it from supplying the Chicago market to any considerable extent.²² The Belleville mines were the oldest in the state, and produced nearly one half the coal mined in Illinois. Their proximity to St. Louis made the mines of this district very profitable.²³ For some reason lead-mining was of less importance in 1850 than it had been fifteen or twenty years earlier. The Galena district was the only part of the state where any considerable amount of lead was mined, and even there the yield was on the decrease.²⁴ Thus, both coal and lead-mining were of comparatively little importance, and less than a thousand miners were employed in the entire state in 1850.²⁵

Illinois was primarily an agricultural state at the close of the fifth decade of the 19th century and a very small proportion of the population was engaged in other pursuits. Slightly over 3100 different establishments existed in the state, varying in size from a small village tannery or carpenter shop employing two or three men to large plants such as the McCormick Reaper Company at Chicago.²⁶ Altogether, the industries of the state

¹⁹Compendium U. S. Census, 1850, p. 170.

²⁰Cf. Chap. v.

²¹J. W. Foster, *Report on Mineral Lands on the Illinois Central Railroad*.

²²*Ibid.*

²³*Ibid.*; Ackerman, *Early Illinois Railroads*, p. 17.

²⁴Wm. Spensley, *The Mines of Jo Daviess County*; Seventh Census (1850), p. 115.

²⁵J. W. Foster, *Report on Mineral Resources on the Illinois Central Railroad*; Seventh Census (1850), p. 115. Cf. Chap. v.

²⁶Seventh Census (1850), p. 115.

had a capital of six and a half million dollars, employed a force of twelve thousand hands, and produced products valued at seventeen and a quarter millions.²⁷ Packing, flouring mills, distilleries, breweries, iron and steel works, woolen mills, agricultural implement works, ship building plants, tanneries, and brick works were the leading industries.²⁸ Outside of the cities industrial conditions were backward, but not as primitive as many writers indicate. The log cabin and homespun were regarded as evidences of lack of progress, and settlers, even on the isolated farms of the interior, were supplied with many of the luxuries of civilized life.

The lack of internal transportation, with the accompanying isolation of the interior counties of the state, the backward agricultural conditions, and the unimportance of mining and manufacturing were an effective check on the trade between Illinois and the eastern and southern states. In the period before the Civil war there were three principal markets for the surplus products of the Northwest, (1) the North Atlantic seaboard, (2) the lower Mississippi valley, and (3) western Europe. In 1850 there was good connection between Chicago or St. Louis and these markets. The Great Lakes and the Erie Canal afforded western grain the cheapest means of inland transportation in the country. The Mississippi River likewise offered cheap transportation to the population along its banks. The introduction of the steamboat on both the Great Lakes and the rivers permitted extensive reductions in the cost of carrying such bulky goods as grain and lumber. Consequently, farm products could be sent east or south over the waterways at reasonable charges after they had been brought to a lake or river port.

However, as already noted, the lack of roads, canals, and railroads prevented the movement of grain and pork from the central counties of Illinois to either the lake or the Mississippi River. Only the counties directly on the banks of the waterways could take advantage of the low charges from Chicago or St. Louis to New York or New Orleans. In other words, the great agricultural resources of Illinois were unavailable. Illinois wheat, corn, oats, and live stock were shipped east or south in comparatively slight quantities. Although the state ranked first among all the states of the Union in the yield of grain, New York, Pennsylvania, Ohio, Indiana, Missouri, Kentucky

²⁷Seventh Census (1850), p. 115; cf. Chap. v.

²⁸For a much more detailed description of the trade routes from Illinois east and south, cf. Chap. v.

and Tennessee each supplied a larger portion of the southern, eastern or European demand than did Illinois. Out of a total production of seventy-seven million bushels of the three staples, oats, corn and wheat, less than three million bushels were forwarded from Chicago and the amount sent from Ohio or Mississippi river towns was not much larger.²⁹ If we compare the production and shipments of grain in 1850 and 1880, for instance, the difference shows among other things the effects of poor transportation on the state. Against seven or eight million bushels shipped east and south in 1850 twenty times as much was moved in the later year.

With conditions as they were in the middle of the nineteenth century, the most important need of Illinois was some system of transportation which would connect the fertile interior counties with the Great Lakes and the Mississippi River. The development of a large portion of the state depended upon the construction of such means of communication. Many schemes came before the people, but the one that had the greatest possibilities and which appealed most strongly to the imagination of the citizens of the state was a central railroad from Galena to Cairo.³⁰

²⁹*Chicago Daily Democrat*, January 23, 1850; Seventh Census (1850).

³⁰The most important references used in this and subsequent chapters are found in the footnotes at the bottom of each page. At the end of Chapter VII a critical bibliography of all authorities made use of in this monograph will be found. Many of the topics treated in Chapter I are discussed at greater length in Chapter V, and cross references are given.

CHAPTER II.

THE LAND GRANT AND CHARTER.

A great central highway connecting the northern and southern counties of Illinois had always been a favorite project with the legislatures and executives of the state. As early as 1830 Governor Coles suggested that "Lake Michigan . . . might easily be tapped and the water taken by canals not only into the Illinois, but on the dividing line between that river and the Wabash down through the center of the state."¹ Only two years later, Lieutenant Governor A. M. Jenkins proposed in the Senate that a survey be made for a central railroad from Cairo to Peru,² and, though somewhat premature, the proposal created considerable discussion, both in and out of the legislature. By 1835, the building of the "Central" had become one of the important issues in state politics. The project was ably advocated by such newspapers as the *Sangamo Journal*³ and also by a number of leading citizens, prominent among them being Sidney Breese, whose fifteen years of service in promoting the undertaking entitles him to be called the "Father of the Illinois Central Railroad".⁴

With such support it was not long before definite measures were taken, and on January 18th, 1836, the Illinois legislature incorporated the Central Railroad Company to construct a railroad from "the mouth of the Ohio . . . to a point on the Illinois River at or near the termination of the Illinois and Michigan Canal."⁵ Fifty-nine incorporators were named, among them Governor Reynolds, Lieutenant Governors A. M. Jenkins and Pierre Menard, Judge Sidney Breese, Darius B. Holbrook and Albert K. Snyder,⁶ and a capital of two and a

¹*Illinois Monthly Magazine*, Vol. I, No. 1, October, 1830.

²Newton, *Early Railway Legislation in Illinois*, p. 7; Ackerman, *Historical Sketch of the Illinois Central Railroad*, pp. 6, 7.

³*Sangamo Journal*, October 31, 1835.

⁴Cf. Appendix to *Early History of Illinois* by Sidney Breese. In this book Mr. Breese reviews his efforts in behalf of the Illinois Central Railroad.

⁵*Session Laws of Illinois*, 1835-1836, pp. 129 ff.

⁶Among the incorporators were Mr. Holbrook and several other

half million dollars was authorized. From the first, this road was regarded as a peculiar state institution, and lest its policy should be dominated by a foreign monopoly, provision was made that no person could subscribe to more than five shares of stock and that at least one fifth of the capital should be offered for sale in the state.⁷ Provision was also made that, whenever the company earned more than twelve per cent on the cost of construction for a period of ten years, the legislature could so reduce earnings and tolls for the next ten years that the earnings would not exceed that amount, reports being made to the state to show cost of construction and gross and net receipts.⁸ In return for this restriction on the powers of the company, the legislature inserted a clause in the charter agreeing not to incorporate any competitive railroad for a period of fifty years.⁹

However, the promoters of the railroad had chosen a most inopportune time for commencing this important undertaking. During the thirties the country was agitated by one of those popular movements in favor of government aid to internal improvements. In Illinois, after months of agitation, mass meetings, and conventions, the movement culminated in the celebrated internal improvement act of 1837. This act provided for an extensive network of railroads intersecting the state in all directions. The backbone of the system was to be a central railroad from Cairo northward, via Vandalia, Shelbyville, Decatur, Bloomington, and Savannah, to Galena, at that time the most important city in the state.¹⁰ In addition there were several cross lines extending from the main stem to the important cities on the eastern or western boundaries. One of these branches from Shelbyville or Decatur to the state line corresponded very closely to the Chicago branch under the act of 1851.¹¹ The entire system amounted to about twelve hundred miles, but the estimates as to cost of construction were surprisingly low. Three

gentlemen connected with him in later enterprises, but as the company never commenced active construction work, it is impossible to say whether this company was controlled by Mr. Holbrook. As he was not a resident of Illinois and otherwise would not have been among the incorporators, the presumption is that he had a very important influence in the organization of the company under this act of 1836.

⁷*Session Laws of Illinois, 1835-1836, p. 134.*

⁸*Ibid.*, p. 133.

⁹*Ibid.*, sec. 6.

¹⁰*Session Laws of Illinois, 1836-1837, p. 121; Newton, Early Railway Legislation in Illinois, pp. 21-23.*

¹¹*Ibid.*

and a half million dollars was regarded as sufficient to build the four hundred and fifty miles of the main line, while the Shelbyville and Alton branches were to cost \$650,000 and \$600,000 respectively, or from seven to ten thousand dollars per mile;¹² less than one fourth what it cost the present company fifteen years later.¹³ A loan, based on the credit of the state, was to provide funds, while a board of seven commissioners was appointed to manage the enterprise during its construction and after completion.¹⁴ Immediately after the passage of the act these commissioners commenced work, and for a while it seemed as if this colossal undertaking might be finished. Grading was commenced at Cairo, Galena, and intermediate points; tens of thousands of dollars were expended on the dikes and levee at Cairo; large quantities of rails were purchased; about forty miles of embankment north of Cairo were completed; and, altogether, something like a million dollars was expended on the central route and branches, although certainly not in the most effectual manner.¹⁵ But the task was entirely beyond the ability of the state; financial difficulties prevented the floating of the necessary bonds; and extravagance, corruption, and mismanagement exhausted the money already procured. The result was that a hundred miles of grading and a few thousand tons of iron were the only tangible results of this second attempt to construct a railroad through the center of Illinois.¹⁶

Even this failure did not deter the state or its citizens from endeavoring to complete the project, and on March 6th, 1843, only six years after the passage of the Internal Improvement Act, the legislature incorporated the Great Western Railway Company, better known as the Holbrook Company.¹⁷ To under-

¹²*Session Laws of Illinois, 1836-1837*, p. 121; Newton, *Early Railway Legislation in Illinois*, pp. 21-23.

¹³*Cf. Chap. vi.*

¹⁴*Session Laws of Illinois, 1836-1837*, p. 121.

¹⁵*Chicago Daily Democrat*, December 24, 1849. Editorial.

¹⁶*Ibid.* It is interesting to note that the legislature which passed the Internal Improvement Act is regarded as the strongest legislature ever convened in Illinois, and contained such men as Lincoln, Logan, Douglas, Bissell, etc. The act was passed to a large extent through an arrangement with the Springfield delegation by which the state capital should go to that city in return for the passage of the act by their votes. Cf. chapters in Moses, *Illinois Historical and Statistical*, and Davidson and Stuve, *History of Illinois*, relating to the Internal Improvement Act.

¹⁷*Session Laws of Illinois, 1843-1844*, pp. 199, 200; Newton, *Early Railway Legislation in Illinois*, p. 33; Ackerman, *Early Illinois Railroads*, p. 9.

stand this act it is necessary to go back six years to March 4th, 1837.

On that date, the Cairo City and Canal Company was incorporated with power to hold real estate in Alexander County, especially the tract of land now included in the corporate limits of Cairo, and to carry on general industrial enterprises.¹⁸ Mr. Darius B. Holbrook, of New York, one of the incorporators of the Central Railroad of 1836, was elected president, and for twenty years the enterprise was dominated by his masterful personality until the two became synonymous.¹⁹ During the prosperous period just before the panic the company borrowed between two and three million dollars, largely from English capitalists; purchased several thousand acres of land at the mouth of the Ohio River; established industries of all kinds; laid out an extensive city at what is now Cairo; protected it by embankments and levees; carried on a general mercantile business; and enacted ordinances for the government of the citizens of Cairo.²⁰ However, the resources of the company were not equal to the demands made upon it and the failure of the internal improvement policy in 1840, following closely after the severe panic of 1837, forced the enterprise into bankruptcy. English investors refused further financial support and the stoppage of work on the state railroad destroyed the undeveloped industries at Cairo. The directors neglected the undertaking; the property in and near Cairo was abandoned; and for a time the place was occupied only by squatters and disreputable characters from the river boats.²¹

The extreme depression existing in Illinois after the panic of 1837 and the failure of the state policy prevented Mr. Holbrook from doing anything with the Cairo City and Canal Company until 1843. Realizing the possibilities of the "Central" railroad, he induced the legislature to pass the Great Western Railway Act of that year. According to the charter the presi-

¹⁸*Session Laws of Illinois, 1836-1837, March 4, 1837.* The powers granted the Cairo company by the legislature were almost unlimited and the company's acts were often in opposition to the general acts of the General Assembly.

¹⁹In nearly all newspaper references to the Cairo City and Canal Company it is referred to as the Holbrook Company. Mr. Holbrook was regarded as an unscrupulous promoter and was thoroughly disliked throughout the state.

²⁰Anon., *History of Cairo*, Publications of the Cairo City and Canal Company; Henry Long, *History and Prospects of Cairo*.

²¹*Ibid.*

dent and directors of the Cairo City and Canal Company were incorporated as the Great Western Railway Company and were given authority to construct a railway from Cairo to the Illinois and Michigan Canal.²² In many ways this act was quite favorable to the state. The otherwise worthless grading done in 1837 to 1840 was to be purchased at a fair valuation; twenty-five per cent of the net receipts from operation, after a twelve per cent dividend had been paid on the stock, were to go to the state; and the legislature could alter the charter of both the Great Western Company and Cairo City and Canal Company after all the indebtedness of the former was paid. But, for half a dozen years the Cairo Company had been known as a flagrant example of speculative and corrupt corporate management, and to turn over to such a company the most important industrial enterprise within the state, without reasonable compensation or even adequate safeguards as to the completion of the work, was, to say the least, a short sighted policy. Moreover, a clause was inserted in the closing section of the act surrendering to the company any public lands which might come into the possession of the state of Illinois during the life of the charter. Not even a guarantee was demanded that such lands should be used for the construction of the railroad. This legislation shows the wretched financial condition of the state in 1843 and illustrates the lack of foresight characteristic of the General Assembly during the period.²³

For a time it seemed as if the company was seriously determined to proceed with the "Central" railroad. Large sums were borrowed and expended in finishing the original state surveys and completing the grading. Numerous buildings were erected at Cairo, and an extensive system of levees was planned and partially constructed.²⁴ But conditions were not favorable, and the company could not obtain capital to continue the work. Several millions had already been expended by the Cairo company without dividend paying results; all Illinois credit, both state and private, was under suspicion on account of the partial repudiation of the state debt; and eastern and European cap-

²²*Session Laws of Illinois, 1842-1843*, pp. 199 ff. The terms of the act are peculiar and this provision making the directors of one company directors of another is typical of the loose charters granted by state legislatures before the Civil War. Contrast this charter with the charter of February 10, 1851.

²³*Session Laws of Illinois, 1843-1844*, pp. 199 ff; p. 203, sec. 18.

²⁴Ackerman, *Historical Sketch of the Illinois Central Railroad*, p. 10.

italists refused to risk further investments in Illinois.²⁵ Lack of funds stopped all construction within a few months after the charter was secured and the directors finally gave up in despair. On March 3, 1845, with the consent of the company, the charter was repealed by special act of the legislature; all work done by the company reverted to the state;²⁶ and the third and most promising attempt to construct the "Central" railroad ended with heavy loss to the promoters and no profit to the state.

The failure of the Great Western Railway, following closely upon the disastrous Internal Improvement project of 1837-1840, made it evident to the legislature, as well as to local and eastern capitalists, that under the depressed condition of Illinois credit, the construction of this important and expensive railroad was an utter impossibility without substantial aid from the national government. As a result, the efforts of the state during the seven years from 1843 to 1850 were directed almost entirely towards obtaining such support.

Under these circumstances, the people of the state considered themselves fortunate in having elected to the Senate of the United States, in 1843, Judge Sidney Breese, who was regarded as the most enthusiastic advocate of the "Central". On December 23rd, 1843, only a few days after being sworn in as senator, he introduced into Congress a memorial of the Great Western Company praying for preemption rights to a portion of the public lands through which the proposed road would run. Although profit to the railroad could only come from selling the land at more than a dollar and a quarter an acre, the preemption price, the measure met with such indifference and opposition that the committee on public lands, to which the memorial was referred, refused to report a bill.²⁷

²⁵*Session Laws of Illinois*, 1844-1845, March 3, 1845.

²⁶*Ibid.*

²⁷*Sen. J.*, December 23, 1843; Ackerman, *Historical Sketch of the Illinois Central Railroad*, p. 10. As Breese was elected at the session of the legislature which passed the Great Western Act of March 6, 1843, containing the provision turning over to that company any federal lands the state might receive, and immediately after taking his seat in the Senate introduced a bill granting a preemption right to that company, it looks as if there might have been some understanding between him and the Cairo Company. Breese was always a warm supporter of the Cairo Company. The Cairo City and Canal Company was very unpopular in Illinois, especially among the people. From the act of 1836 on Judge Breese was an outspoken advocate of this company and believed the

Two years later, Judge Breese was appointed chairman of the Committee on Public Lands and, with the additional prestige and influence of that position, he introduced a bill, in 1846, granting alternate sections of public land to the Northern Cross and Central railroads of Illinois.²⁸ Breese himself had little faith in a direct grant of land and did not push the project vigorously. As chairman of the Committee on Public Lands, to which all these bills were referred, he was able to make a strong report in favor of his proposal, but, for some reason, the bill was not brought up after leaving the committee.²⁹ Undismayed by his previous lack of success, he again introduced, at the second session of the twenty-ninth Congress, his favorite project of a preemption grant.³⁰ The Committee on Public Lands advocated the measure in a vigorous report, which ranks among the ablest congressional documents on the land question. The arguments advanced in favor of the bills were convincing, and Senator Breese followed up his report by active work on the floor of the Senate. His persistent and energetic support of the plan had its influence, and the Senate finally passed his measure.³¹ The bill went to the House, but none of the Illinois delegation took an active interest in it, and there is no evidence in the House records that an attempt was made to secure its passage.³²

When the condition of political affairs at the time is considered it is evident that Breese was contending against almost insurmountable difficulties, and, although his proposals met with little success, he must be given great credit for accustoming the members of Congress to the novel project of granting public land to assist, directly or indirectly, in the construction of private railroads. His reports from the Committee on Public Lands

railroad should be built by the Great Western Company. He feared a direct grant of land would be used by the legislature to renew the Internal Improvement policy of 1837, and for that reason, together with his general support of the Holbrook corporations, he endeavored to get a right of preemption for the Great Western. The Illinois members of the house desired the construction of the central railroad, but not under the direction of Mr. Holbrook. There are no grounds to question Mr. Breese's good faith in his advocacy of the Holbrook companies.

²⁸*Congressional Globe*, 29 Cong., 1 sess., p. 208; Sanborn, *Congressional Grants of Land in Aid of Railways*, p. 25.

²⁹*Ibid.*

³⁰*Congressional Globe*, 29 Cong., 2 sess.; Sanborn, p. 26.

³¹*Ibid.*; Ackerman, *Historical Sketch of the Illinois Central Railroad*, p. 10.

³²*Ibid.*

were clear and logical statements of the arguments in favor of congressional aid. He lacked, however, the political prestige and aggressive personality necessary to secure the assent of his colleagues to such an unusual policy. He also failed in securing the support of the Illinois delegation in the House, and complete success was, thus, almost impossible.³³

Fortunately for the Central project, Stephen A. Douglas entered the United States Senate in 1847, and within a short time became the recognized leader of the dominant party in that body. Like Breese he was an ardent advocate of a railroad through central Illinois, and believed that the federal government should assist in its construction. But the two men differed in the methods to be adopted by the government. Breese advocated conferring the right of preemption upon a private company. Douglas favored a direct grant of land, not to a private corporation but to the state of Illinois. In this position he was ably seconded by the Illinois delegation in the House of Representatives.³⁴

At the commencement of the long session of 1847-8, each senator introduced a measure in accordance with his respective view. Breese presented his previous plan for a preemption right to the Cairo company for a railroad from Cairo to Galena.³⁵ On the other hand his colleague advocated a direct grant of land to the state of Illinois to be used in building a first class railroad from Cairo to Galena, as in Breese's plan. In addition he proposed that there be a branch from this "main" line to Chicago;³⁶ in effect this meant a trunk line from the Great Lakes at Chicago to the Mississippi River at Cairo. By his plan whatever profit would come from an increased value of the land would inure to the benefit of the state, not to the advantage of a private corporation. The whole plan was one of those shrewd schemes for which Douglas was famous. From an ill-fated and ill-managed local project of one of the less important western states the Illinois Central became a national enterprise.

In deference to his colleague, Judge Breese consented to postpone his preemption bill, though he still kept it on the calendar that, as he said, he might call it up after the failure

³³Cf. correspondence between Douglas and Breese in Appendix, *Early History of Illinois*, by Sidney Breese.

³⁴*Congressional Globe*, 29 Cong., 2 sess.

³⁵*Ibid.*, 30 Cong., 1 sess.

³⁶*Ibid.*

of the land grant measure.³⁷ The bill introduced by Senator Douglas was reported favorably from the Committee on Public Lands, and was made a special order on May 3rd, 1848. From that time its passage through the Senate was comparatively easy. In general the measure was supported by members from the western states and opposed by representatives of the eastern and southern states.³⁸ Although introduced by the Democratic leader of the Senate, the land grant received much better support from the Whigs than from their opponents. As distribution of the public lands in this way was distinctly a Whig policy, it was natural that the minority should favor the bill. Moreover, most of the unoccupied government land was in the West, and representatives of states where the amount was large aided the measure on the assumption that its success might mean a similar grant to them later on. Likewise members from the eastern states opposed this new policy on the ground that the whole nation should share the benefits of the western lands. Senators and representatives from the southern and gulf states were strict constructionists and opposed Congressional action which would assist either the North or West at the expense of the South. Their position was entirely consistent with the immediate interests of their constituency. After the fashion of the time, most of the speeches defended or opposed the land grant on constitutional grounds, the main point of dispute being

³⁷Breese to Douglas, January 5, 1850, quoted in *Illinois State Journal*, February 6, 1851; Sanborn, *Congressional Grants of Land in Aid of Railways*, p. 26.

³⁸*Congressional Globe*, 30 Cong., 1 sess., p. 314; Appendix, pp. 535, 536, 537; Sanborn, *Congressional Grants of Land in Aid of Railways*, pp. 26 ff. The vote on the measure in the House and Senate was distributed as follows:

	FOR		AGAINST	
	SENATE	HOUSE	SENATE	HOUSE
New England.....	2	10	3	5
Middle	2	25	1	22
South	2	7	3	31
Gulf	4	3	3	4
West (land).....	10	27	0	9
West (non-land).....	4	1	1	8
	—	—	—	—
TOTAL	24	73	11	79
Democrat	14	30	10	42
Whig	10	43	1	37

whether Congress had a constitutional right to give away the national lands in aid of internal improvements.³⁹

With the members of Congress divided along the lines indicated above, the success of the bill depended upon the relative strength of the West as opposed to the East and South. Although the bulk of the population was in the eastern and southern states the number of western states was as large as the number of eastern states. As all states had an equal representation in the Senate the passage of the bill was comparatively easy, the final vote standing twenty-four for, as against eleven opposed to the bill.⁴⁰ In the House, however, where representation was in proportion to population, the large middle and southern states were able to defeat the act. The vote was close, and had some of the western members supported the grant more vigorously it would probably have been passed. As it was, the majority against it was only seven.⁴¹ In accordance with a previous understanding, Judge Breese again introduced his pre-emption bill at the short session, and, though not in conformity with the views of Douglas, the latter, as a personal and political favor to his colleague, allowed it to pass the Senate, with the tacit understanding that it was to be rejected in the House of Representatives.⁴²

In the six years since Judge Breese introduced his first pre-emption bill, sentiment in both the Senate and House had become quite favorable to some kind of a land grant or pre-emption right in aid of the Illinois Central Railroad. Any measure would undoubtedly be of considerable value to the state of Illinois or to private parties who might build the road, and the Cairo City and Canal Company determined to make use of the apparently favorable conditions. Accordingly, after the failure of the first land grant bill and probably in anticipation of greater success at the next session, the Cairo City and Canal Company petitioned the legislature for a renewal of their pre-

³⁹*Congressional Globe*, 30 Cong., 1 sess.; Appendix. The views of the members of Congress are gathered from speeches in the *Globe*.

⁴⁰*Congressional Globe*, 30 Cong., 1 sess., p. 314.

⁴¹Cf. p. 18, n. 38. The bill was refused a third reading by vote of 74-78 (73-79?) *Ho. J.*, 30 Cong., 1 sess., p. 1270; *Congressional Globe*, 30 Cong., 1 sess., p. 1071; Sanborn, *Congressional Grants of Land in Aid of Railways*, pp. 29, 30.

⁴²Douglas to Breese, letter quoted in *Illinois State Journal*, February 6, 1851. Cf. correspondence between Breese and Douglas in Appendix to Breese's *Early History of Illinois*.

vious rights, which had been repealed by the act of March 3rd, 1845. Although the Holbrook companies generally were disliked throughout the state, they represented the wealthiest aggregation of capital in Illinois, and apparently were the best able to complete the Illinois Central Railroad. In recognition of this fact the legislature on February 10th, 1849 reincorporated the Great Western Railway Company,⁴³ with all its former privileges, and, in addition, gave it outright the remains of the old state surveys, gradings, and embankments, and a right of way two hundred feet wide from Cairo to Galena.⁴⁴ The surprising feature of the act is that the legislature included in the charter the clause surrendering to the company whatever lands the federal government should grant the state. No restriction whatever was placed on the use of these lands, and, so far as the charter was concerned, these lands, once in the possession of the corporation, might have been used for the personal advantage of the president or directors. Moreover, the only condition imposed upon the company in return for the charter was that it should spend at least \$200,000 each year until the road was completed, and even this condition was vague and ill defined.⁴⁵

With this remarkable enactment of the legislature before them, it was only natural that members of Congress should hesi-

⁴³*Session Laws of Illinois*, 1849-50, February 10, 1849.

⁴⁴*Ibid.*

⁴⁵The provision in the acts of 1843 and 1849, granting the Great Western Railroad whatever federal lands should come into the possession of the state, is one of the most peculiar ever passed by an Illinois legislature. In 1843 there was little prospect that the national government would ever turn over lands to Illinois to aid in railroad construction, but in 1849 several bills had passed the Senate and one had passed the House giving either preemption or direct grants to Illinois, and it was considered almost certain the 31st Congress would pass the desired legislation. It is very probable that the clause was inserted in both acts as a "joker" and escaped the notice of the members. At the time charters were granted giving private companies almost unlimited powers and evidently this is an example.

At the same time it is very likely that the Cairo City and Canal Company resorted to underhand methods to secure the insertion of this provision. From the bitter criticism of the provision in 1849 and 1850 after the passage of the federal act, especially in the *Springfield Register* and *Journal*, two of the leading papers in the state, it is certain this clause could not have been inserted with the open approval of the legislature. The advantage to the company from such a provision is too obvious to require further reasons in defence of the attitude of the company.

The action of the Great Western Railroad indicates that it was incor-

tate to give to Illinois public lands which might be turned over to a speculative private corporation without materially furthering the "Central" railroad. No one saw this more clearly than Senator Douglas, and, even before the first session of the thirty-first Congress opened, he made vigorous attempts to obtain a repeal of the obnoxious features of the charter. He was not at first successful, but his colleagues at Washington and prominent citizens of the state assisted him and just before Congress convened he was able to induce the president and directors of the Cairo City and Canal Company to execute a release of the charter of the Great Western Railroad Company. The surrender was only conditional, however, and the Cairo company insisted that the release should be accepted at the next session of the legislature and that another company be immediately incorporated to carry on the project.⁴⁶

The Great Western tangle having been straightened out, the Illinois delegation in Congress was in a position to renew their efforts in behalf of the Illinois Central grant. At the previous election several changes were made in the personnel of the delegation, which gave new strength to the advocates of a direct grant. In the Senate Judge Breese was succeeded by General Shields, and the new representatives were in sympathy with the plans of Douglas.⁴⁷ Judge Douglas was an able politician, as porated with the object of securing the land grant. From its incorporation until the passage of the federal land grant the company did practically nothing. Then with the passage of the Act of September 20th several thousand dollars were expended in and near Cairo, evidently to fulfill the legal requirements of the charter. For a full discussion of this matter, the reader is referred to the files of the *Journal and Register*, Springfield, during the Fall and Winter of 1849. (*Illinois Weekly State Journal*, October 16, 1850.)

⁴⁶*Illinois State Journal*, October 16, 1850. There was a very bitter fight in Illinois over the release of the charter of the Great Western Company. The Cairo Company was, of course, reluctant to surrender the charter, and they were supported by many political opponents of Douglas. The company obtained considerable aid from politicians in the southern part of the state, but was almost unanimously opposed by the central and northern parts of the state. The two Springfield newspapers were the most bitter opponents of the Hobbrook company. Cf. the conflict over the passage of the repeal act of February 10, 1851. In October, 1850, Mr. Holbrook, as President of the company, executed a release, but Mr. Douglas did not accept it. Cf. correspondence between Breese and Douglas, in Appendix to Breese's *Early History of Illinois*.

⁴⁷General Shields was a warm personal friend of Senator Douglas, while Senator Breese was not always on intimate terms with him. Shields

well as a statesman of national prominence, and the experience of the previous session showed the necessity of aggressive action. As a matter of course, the friends of the land grant, both in and out of Congress, secured a large number of memorials and petitions requesting definite action by the federal government.⁴⁸ In addition, Senator Douglas resorted to various political bargains to insure complete success of his policy. In the previous session he had added to his plan a branch from the proposed main line of the railroad to Chicago, and thus made the enterprise one which appealed to the interests of many eastern representatives.⁴⁹ In his plans for the thirty-first Congress he made the railroad even more comprehensive. He extended the proposed grant to the Mobile and Ohio Railroad, which was then endeavoring to get a foothold in southern Alabama, and to certain other southern roads. A trunk line from Chicago to Mobile was a project which appealed to the imagination of the people of the entire Mississippi valley; even the strict constructionists had to admit it was a matter of more than state importance. At the same time, the southern part of the plan removed the opposition of the gulf states and secured the active support of certain northern members who were very much interested in the Mobile and Ohio Railroad.⁵⁰ He also removed the opposition of certain New England and Pennsylvania Congressmen by a compromise on the tariff. Douglas cared very little about new

was also one of the most popular politicians in Illinois. Among the leading supporters of the measure were Representatives Bissell, Baker, and Wentworth of Illinois.

⁴⁸Ackerman, *Historical Sketch of the Illinois Central Railroad*, p. 17. Wentworth, *Congressional Reminiscences* (Fergus Historical Series).

⁴⁹The addition of the Chicago branch is interesting as showing the increased importance of northern Illinois and the district around Chicago. In the early plans the northeastern part of the state was neglected and this addition by Douglas is a recognition of the changes which took place in the previous fifteen years. Senator Douglas was accused of making the change in order to increase the value of Chicago real estate, in which he was deeply interested. There may be some truth in the statement, but it also shows that he recognized the future importance of Chicago. The entire success of the Illinois Central has depended upon the Chicago branch, and if this extension had not been made, the road would have become a merely local undertaking.

⁵⁰Sanborn, *Congressional Grants of Land in Aid of Railways*, p. 31; Breese to Douglas, *Illinois State Journal*, February 6, 1851; Wentworth, *Congressional Reminiscences* (Fergus Historical Series).

tariff legislation, while the eastern representatives were not interested in the land grant, but did desire a change in the tariff. A compromise was easy and the eastern Congressmen agreed to support the Illinois Central measure in return for active efforts on the part of the western members in favor of a change of tariff.⁵¹ A third agreement, though of less importance than the other two, was arranged late in the session by which Dunleith, opposite Dubuque, Iowa, instead of Galena, became the northern terminus of the proposed road.⁵² These various agreements and compromises materially strengthened the Illinois delegation and made the passage of the land grant act a practical certainty.

A few days before the second release was executed Senator Douglas introduced in the Senate a bill granting to Illinois alternate sections of public land for six miles on each side of a proposed railroad from Cairo to Galena and from Chicago to a junction with the main line.⁵³ With the consent, and probably at the suggestion of the Illinois Senators, King of Alabama added an amendment making a similar grant to the states of Mississippi and Alabama,⁵⁴ and a little later Senator Dodge of Iowa made another amendment extending the road to Dun-

⁵¹Wentworth, *Congressional Reminiscences* (Fergus Historical Series). Among the eastern members secured by this agreement were Daniel Webster and Mr. Ashmun of Massachusetts. It is very likely that the Boston and New York capitalists who built the Illinois Central were deeply interested in the success of the land grant act. Mr. Rantoul, one of the leading promoters, was a close personal friend of the two gentlemen named above, and succeeded Mr. Webster in the Senate. Mr. Ashmun was also interested in the Illinois Central, and the town of that name on the charter line is named after him.

⁵²Ackerman, *Historical Sketch of the Illinois Central Railroad*, p. 17. Senator Dodge, of Iowa, is credited with being the originator of this extension. The change was bitterly opposed by Galena and was instrumental in causing the decline of that city. Two railroads were being projected from Dubuque in 1849, one of them, the present Dubuque & Sioux City Railroad and the extension to Dunleith, made possible a through line from Chicago and Cairo to central Iowa. The change, although of great importance to the Illinois Central, attracted little attention in Congress.

⁵³*Sen. J.*, 31 Cong., 1 sess.

⁵⁴*Congressional Globe*, 31 Cong., 1 sess., p. 845. It should be noticed that the Act of September 20, 1850 makes grants of land to the three states of unoccupied government land inside the state limits to be used in building a railroad inside the state. This is due to the strict constructionist views of the Democratic majority of Congress. Cf. the Union Pacific Land Grant Act.

leith.⁵⁵ With these amendments securing the support mentioned on the previous pages the passage of the bill through the Senate was comparatively easy and the measure was approved by a vote of 26-14. The real opposition came in the House, but the Illinois delegation, under the leadership of Bissell, McClermand, and Wentworth, forced the Senate bill through the lower house. At times the opposition was extremely bitter, and it was only by the various agreements effected in the early part of the session that the act secured sufficient votes to be passed. Finally, a vote was taken, and the bill passed⁵⁶ the House of Representatives by a majority of twenty-five, the vote taking place on the 17th of September. Three days later, President Fillmore signed the bill and the construction of the Illinois Central was assured so far as the United States Congress was concerned.⁵⁷

By the terms of this act alternate sections six miles on each side of the proposed railroad were given to the states of Illinois, Mississippi and Alabama to construct a railroad from Chicago to Mobile. The act, as it related to Illinois, provided for a railroad "from the southern terminus of the Illinois and Michigan Canal to a point at or near the junction of the Ohio and Mississippi rivers, with a branch of the same to Chicago on Lake Michigan, and another, via the town of Galena, in said state, to Dubuque, in the state of Iowa."⁵⁸ The land in alternate, even numbered, sections for six miles on both sides of this road was given to the state to assist this undertaking, but with the provision that the road should be completed within ten years and that if this were not done all unsold lands should revert to the federal government and the state should pay to the United States whatever it had received for land already sold. Furthermore, the road should be a public highway, free of toll, or other charges, for the transportation of any property or troops of the United

⁵⁵Ackerman, *Historical Sketch of the Illinois Central Railroad*, p. 17.

⁵⁶The vote on the land grant bill was as follows:

	FOR		AGAINST	
	SENATE	HOUSE	SENATE	HOUSE
New England.....	1	10	4	11
Middle	2	28	4	22
South	2	8	3	23
Gulf	5	13	1	1
West (land).....	13	34	1	12
West (non-land).....	3	8	1	7
	—	—	—	—
TOTAL	26	101	14	76

⁵⁷U. S. *Statutes at Large*, IX, 466.

⁵⁸*Ibid.*

States; Congress was to decide what compensation should be given for carrying the mails. To compensate for the loss of land Congress ordered that the alternate, odd numbered, sections six miles on either side of the road, belonging to the government, should be sold at \$2.50 per acre, instead of \$1.25 as previously. Lands already settled were to be retained by the settlers upon payment to the state of the preemption price, or the latter could recompense itself by taking other unoccupied land within fifteen miles of the road.⁵⁹ The land could never be used for any purpose other than the construction of the road.

The passage of the land grant act of September 20th marks an epoch in the history of Illinois. At last, after years of discouragement and failure, the state had in sight the means necessary to build the Illinois Central Railroad. To even the most conservative citizen, three million acres of land seemed sufficient to guarantee the construction of the road. The more sanguine looked forward to the time when the central counties of the state would be thickly settled and the land grant had paid off all of the burdensome Internal Improvement Debt. Senator Douglas and the other representatives in Congress who had secured the grant were applauded from Cairo to Galena; mass meetings and banquets were held in their honor; and every means was taken to show the popular appreciation of their services.⁶⁰ The influence on the general credit of Illinois was great as was shown by a rise of several points in the internal improvement stock.⁶¹

The mere passage of the federal act was the least difficult of the many problems confronting the friends of the Illinois Central. For some fourteen years the questions connected with this railroad had been before the legislature and the citizens of

⁵⁹*U. S. Statutes at Large*, IX, 46.

⁶⁰Ackerman, *Early Illinois Railroads*, p. 35. On their return to Illinois at the close of the session, Mr. Douglas and Gen. Shields were tendered a public dinner by the citizens of Chicago, in consideration of their services in obtaining the passage of this act. In declining the honor, they modestly awarded to their colleagues in the house the full measure of credit for having successfully carried the bill through to completion.

⁶¹"The *New York Evening Post* of the 18th inst. says: A considerable advance has been obtained in Illinois Internal Improvement stock: 55 $\frac{3}{4}$ was bid for it this morning and 60 asked. This is a rise of five to ten per cent and is due to the advising obtained this morning from Washington of the donation by congress of lands in Illinois in aid of the railroad constructed between Chicago and Mobile, which runs through the whole state of Illinois—also of the swamp land measure." *Illinois Daily Register*, September 30, 1850.

the state, and now that success was probable, all the previous conflicts were renewed with additional strength. The most troublesome of these involved the method of construction and the route.

There were four possible ways of utilizing the land grant, each of which had its vigorous adherents: (1) State construction of the railroad by means of the grant, along the line of the internal improvement plan of 1837; (2) Surrender of the grant to the bondholders and construction by them on terms similar to those made by the holders of canal bonds in 1840; (3) Completion by the Great Western Railway Company under its charter of 1849, including the retention of all state lands; (4) Creation of an entirely new private corporation and the transfer to it of the land grant under certain restrictions and with certain payments to the state; this company to assume entire responsibility for the completion of the road.

To many citizens state construction of the Illinois Central still seemed a feasible project. From 1831 to 1843 the various plans for the railroad depended on government support, and, despite the collapse of the Internal Improvement plan of 1837, there was considerable talk of direct construction by the legislature. The cost of building the road was underestimated, while the value of the land was overestimated. It was expected that the road could be built without recourse to bond issues and it was thought that the profits from operation would then quickly retire the old state debt.⁶² But the panic of 1840 and the depressing influence of the debt were still vivid in the minds of the citizens of Illinois, and they generally condemned any further attempt by the state. As Senator Shields said:—"capitalists will not embark in this enterprise unless they have the control of the servants, agents, etc. . . . in a word of the construction and management of the road."⁶³

Another form of semi-legislative management was contained in the so-called "bond-holders' plan", which was submitted to the legislature in January, 1851. As a result of the various attempts at internal improvement Illinois had accumulated a debt of some fifteen million dollars and was unable to meet the

⁶²For instance, Mr. John S. Wright, of Chicago, published a pamphlet in which he took the ground that the grant, being of such immense value, the State should hold the lands and again attempt the construction of the road. Ackerman, *Early Illinois Railroads*, p. 35.

⁶³Speech of General Shields, Springfield, Ill., November 20, 1850, given in full in *Illinois Weekly Journal*, November 20, 1850.

full interest charges. In fact, the state had barely escaped repudiation or bankruptcy, and the bondholders supposed it would be utterly incapable of attracting the capital necessary to construct the Illinois Central. Under the circumstances, certain eastern bondholders suggested an arrangement somewhat similar to the one under which the Illinois and Michigan Canal was built. A company, composed largely of bondholders, was to be chartered and given power to construct the railroad. Three dollars of bonds or four dollars of stock, entitled new internal improvement stock, were to be given for each dollar of cash paid in. The state was to receive stock at par to an amount equal to the value of the lands sold, and in return pay all expenses of surveys, etc. The stock belonging to the state must be set apart to retire the state debt. The stock of the new company could also be made the basis for state banking.⁶⁴ On the whole, the terms were about as onerous as could be imposed on a bankrupt state, and they are in striking contrast to the Illinois Central charter of 1850. It is impossible to state just what men were behind the scheme, as it was disowned by many leading bondholders. The project never received serious attention from either the newspapers or the legislature.⁶⁵

The proposed construction by the Great Western Railroad, or in other words by Mr. Holbrook and the Cairo City and Canal Company, attracted much more attention than either of the other two plans. In 1849, as already mentioned, the legislature renewed the charter of the Great Western, including a grant to the company of whatever lands the state might receive from the federal government. Then, in December, 1849, the directors, under pressure from Senator Douglas, executed a release of both the charter and the grant, on condition that the legislature would accept the same at its next session and incorporate another company to carry on the enterprise. The charter of 1849 was evidently obtained with the distinct object of securing the federal land grant, and no work was done on the railroad until it was almost certain that congress would pass the act. Then, construction work was started, and it was stated that large quantities of rails were purchased in England. At the same time, active

⁶⁴A copy of the bill presented by the bondholders is given in the *Chicago Daily Democrat*, January 11, 1851, and a summary is given in the *Illinois Weekly Journal*, January 29, 1851. Cf. Ackerman, *Early Illinois Railroads*, p. 37, n.

⁶⁵Editorial in *Illinois Weekly Journal*, January 29, 1851; *ibid.*, January 22.

efforts were made to defeat any bill repealing the charter. It is uncertain whether this company intended to carry on the undertaking, or, as Senator Douglas alleged, merely sell the charter in Europe. At any rate, the opposition to the Great Western, especially in the southern part of the state, was bitter and deep seated.⁶⁶

The last plan was to turn over the grant under proper restrictions to a private corporation, other than the Cairo City and Canal Company. The memorial of the Boston capitalists, who later built the road, was the first direct proposition of the kind, but it is probable that the memorialists had early suggested a similar plan to the leading legislators of the state. In all probability, other capitalists were also deeply interested in the railroad. However, there was no definite project of the kind before the people during November and December, 1850.⁶⁷

More troublesome than the method of construction, though of less real importance, was the matter of route. When Lieutenant Governor Jenkins made his proposal in 1832, it was for a railroad from Cairo to Peru at the junction of the canal and the Illinois river. In the internal improvement act Galena was made the northern terminus and the route was more distinctly marked; it included Vandalia, Shelbyville, Decatur, Bloomington, and Savannah. This line was retained in the charters of 1843 and 1849, and in the various bills introduced into the federal Senate by Sidney Breese. But Judge Douglas, in his bills of 1847 and 1849, radically altered the route by extending the road to Dunleith and making a branch to Chicago. As a result, the whole question of route was reopened, and every city and county of importance in the central part of the state asserted its claims. The contests over the Chicago and Dunleith branches were especially strenuous, and the continued discussion resulted in greater confusion. The decision was necessarily left to the legislature and by them transferred to the company.⁶⁸

Congress passed the land grant act in September, 1850, and the legislature was elected the following November. On account

⁶⁶This opposition to the Holbrook companies is evident in the newspaper discussion of the time.

⁶⁷None is given in any of the important state papers and if any project were before the people it would be given in the newspapers.

⁶⁸*Illinois Weekly Journal*, January 22, 1851; also numerous articles in *Chicago Daily Democrat*, *Illinois Weekly Journal*, *Illinois Daily* and *Weekly Register* during October, November, and December, 1850, and January, 1851.

of the release of the Great Western charter it was necessary to settle the matter at the first session of the General Assembly, and, consequently, the selection of proper representatives and senators was of vital importance. As soon as it became evident that the federal House of Representatives would act favorably on Senator Douglas' bill, the advocates of state construction and the friends and opponents of the Cairo City and Canal Company commenced an active campaign to secure a majority of the members of the legislature. Other state issues were consigned to the background and the question of the land grant and the acceptance of the Great Western Release were the important factors in the election of members to the sixteenth General Assembly. The newspapers of the state had numerous editorials and contributed articles defending or opposing the respective plans, or emphasizing the importance of one route over another. Mass meetings and conventions were held at various points along the line of the proposed railroad, and the excitement often was at fever heat. By November the controversy had become bitter and personal. Individual motives were impugned; the character of some of the leading newspaper editors, of Mr. Holbrook, Senator Douglas, Judge Breese, and others, was maligned; and charges of bribery and fraud were frequent. By the time the legislature convened in January, the whole discussion had degenerated into a typical Illinois political fight. On the whole, the opponents of both state ownership and of the Holbrook company had much the better of the argument. Only a few newspapers, such as the *Benton Standard* and the *Cairo Times*, and a few politicians, the most prominent of them being Sidney Breese, openly defended the Cairo City and Canal Company or its subsidiary company, the Great Western. However, the Great Western was already in possession of the desired charter and, conditionally, of the land grant. Thus, inaction on the part of the legislature meant success for the Holbrook party, and the Cairo City and Canal Company exerted every effort to block legislation and prevent the incorporation of a rival company. On account of the many minor fights it was not at such a disadvantage as was indicated by newspaper editorials.⁶⁹

⁶⁹The following are the most important references to the conflict between the two factions: *Illinois Daily Register*, October 30, 1850; *Illinois Weekly Journal*, January 22, 29, 1851; *Illinois Daily Register*, November 8, 1850; December 12, 1850; *ibid.*, October 17, 1850; *ibid.*, October 10, 1850; *ibid.*, October 9, 1850; *Illinois Weekly Journal*, November 13, 1850; *ibid.*, November 6, 1850; *ibid.*, October 30, 1850; *ibid.*, October 16, 1850;

Most of the plans had been thoroughly discussed during the campaign, and, when the legislature met the first day of January, 1851, its members were well acquainted with the main points at issue. In the organization of the House the Holbrook faction secured a temporary advantage by the election of Judge Breese as speaker, and during the first two weeks of the session they were strong enough to prevent radical action. Bills were presented in both houses repealing the charter of the Great Western, but both were strongly opposed. The senate passed a bill concerning the Illinois Central, which did not accept the release of the Holbrook company; the house passed a bill accepting the release and refused to adopt the senate measure.⁷⁰ A large majority of the members of each body favored the repeal of the Great Western charter, but until a more reasonable proposition was presented many preferred to retain the Cairo company rather than to be entirely without a means of building the road.

At this stage of the contest affairs were entirely altered by a businesslike memorial presented by Mr. Robert Rantoul of Massachusetts, acting in the interest of a group of wealthy New York and Boston capitalists. In brief, the plan of the memorialists was as follows:— The legislature should create a corporation and surrender to it the federal land grant. In return the incorporators agreed to build a railroad “equal in all respects to the railroad running between Boston and Albany, with such improvements thereon as experience has shown to be desirable

Chicago Tribune, October 22, 1851; *Illinois Weekly Journal*, January 22, 1851; *Illinois Daily Register*, October 23, 1850; *ibid.*, November 20, 1850.

As the leading advocate of the “Central” Senator Douglas had endeavored to secure an early acceptance of the release and continually urged such action from the time he received the final release of the Great Western. Even as early as October, 1849, he had attempted to obtain action by the legislature, but without success (*Illinois Daily Journal*, October 31, 1849). The matter was brought up at the special session and Representative Denny introduced a resolution “that the committee on internal improvements be instructed to inquire into the expediency of so altering and amending or repealing the charter of the Great Western Railway as in their judgment will be best calculated to promote the interests of the state. . . .” (*Illinois Daily Journal*, October 31, 1849). The discussion was at times very heated, but the policy of inaction finally prevailed, it being thought that the matter could rest until the regular session of 1851. (*Illinois Daily Journal*, October 24, 1849).

⁷⁰*Illinois Daily Register*, January 15, 1851; also *Sen. J. and Ho. J.*, January 1-15, 1851.

and expedient; to complete the road by July 4, 1854; and to pay the state _____ per cent of the gross receipts in return for the land.⁷¹ The memorialists were men of considerable capital and experience with railroad promotion in other parts of the country. On the whole, they made a much more favorable offer than could have been expected. The Governor recommended the acceptance of their proposition in a special message, and most of the members of the legislature and friends of the Illinois Central believed that this memorial was a first class opportunity for the state. This is illustrated by the following quotation from the *Illinois Weekly Journal*, "We agree with the legislature that 'this company are seeking no advantages, and that their object is to build the road without loss to themselves and with advantage to the state.'⁷²

Coincident with the transmission of this memorial Mr. Ashael Gridley introduced in the senate a bill "for an act to incorporate the Illinois Central Railroad."⁷³ On February 5th Mr. J. L. D. Morrison offered a substitute for the original bill,⁷⁴ and on the next day it passed by a vote of 23 to 3.⁷⁵ Four days later it passed the house by an almost unanimous vote of seventy-two to two,⁷⁶ and was immediately signed by Governor French.⁷⁷

The passage of the charter through both houses was not as easy as the vote seems to indicate. Shortly after the receipt of the memorial the whole matter was referred to a committee, whose members, in connection with Mr. Rantoul and Colonel Bissell, representatives of the promoters, spent considerable time in preparing the measure. As the duration of the session was limited to forty days, the Holbrook interests made every effort to delay the bill, and during the last week of January and the first of February it looked as if their efforts would meet with

⁷¹Cf. the copy of the memorial given in the Appendix. In the original memorial the amount paid to the state was left vacant. It was proposed in the House that ten per cent be given, but the company, through the efforts of Robert Rantoul and Representative Bissell, managed to reduce the amount to seven per cent. The real reasons for the action of the legislature in this matter are not known, and in his campaign for election as governor, Colonel Bissell was accused of having obtained the reduction to the disadvantage of the state.

⁷²*Illinois Weekly Journal*, January 22, 1851.

⁷³Ackerman, *Early Illinois Railroads*, p. 39.

⁷⁴*Ibid.*

⁷⁵*Illinois Weekly Journal*, February 12, 1851. *Sen. J. and Ho. J.*

⁷⁶*Ibid.*

⁷⁷*Ibid.*

success. At last, as noted above, the bill was passed by both houses only a few days before the close of the session. The main difficulty came in the selection of a route, and the legislature was finally forced to leave the exact location of the road to the incorporators.⁷⁵ The other point of conflict was the percentage to be paid the state. This was finally fixed at seven per cent of the gross receipts, but the company was exempted from paying any state or local taxes.

As passed, the bill incorporated the Illinois Central Railroad company, with a perpetual charter, gave it the remains of the old state surveys and gradings, gave it the federal land grant and right of way, and exempted its property from taxation. In return, the railroad was obliged to complete the main line in four years, and the branches in six, to build the road "equal in all respects to the Great Western of Massachusetts", to hold the state free from any responsibility connected with the grant, and to pay the state seven per cent of the gross earnings.

⁷⁵*Illinois Weekly Journal*, February 5, 12, 1851.

CHAPTER III.

CONSTRUCTION OF THE CHARTER LINES.

Chartering a private corporation with liberal powers and granting it nearly three million acres of public land were merely a preliminary step in the building of the Illinois Central. In 1851 railroad construction was in its infancy. The largest system at that time, the New York and Erie, was only three hundred miles long, and the construction of a first class trunk line some seven hundred miles in length through the thinly settled interior counties of a western state involved engineering and administrative difficulties entirely new to the promoter of the early fifties. Never before in this country had such an enormous amount of capital been expended on a single private undertaking, and what the building of the Canadian Northern or Panama Canal is to-day, the construction of the Illinois Central was in the decade preceding the Civil War.

From the first this final attempt to build a railroad through the center of the state was supported by some of the ablest railroad magnates of the time—men who had had abundant experience in other lines of business activity and who also had the financial resources necessary to push the enterprise to a successful completion. It is doubtful whether twelve men could have been selected who, at the time, possessed the confidence of the country to a greater extent than did Robert Schuyler, Gouverneur Morris, Robert Rantoul, and the other members of the first board of directors.

In general the promoters represented successful merchants who constituted the moneyed class of the period; a class whose activities extended into politics and government, as well as into strictly commercial enterprises. Of the entire board Robert Schuyler and Robert Rantoul were probably the best known and most respected.¹

Robert Rantoul, Jr., the man most influential in securing

¹For an interesting account of the various persons connected with the early history of the Illinois Central the reader is referred to Mr. Ackerman's *Historical Sketch of the Illinois Central Railroad*.

the passage of the charter by the Illinois Legislature, was a leading lawyer of Massachusetts. He had held several high elective and appointive offices under both the federal and state governments and, in 1852, on the death of Daniel Webster, he represented his state in the federal senate during the remainder of the term. During the administration of President Fillmore he was strongly advocated as successor to Secretary of the Treasury Walker, but did not receive the nomination and died shortly afterwards. The charter of 1851 is very largely his work, and during the organization of the company he was influential in shaping its financial policy. The present city of Rantoul about one hundred miles south of Chicago, is named after him.²

Second in importance to Rantoul, was the first president, Robert Schuyler. During the first years of the company's existence he seems to have been the leading director of its work and was most active in organizing the corporation. One company after another, the New York and New Haven, Alton and Sangamon, Great Western, Boston and Albany, and Illinois Central, all came under his direction or control, and in general they were well managed. Up to 1853 his record was entirely above suspicion, but in that year he became involved in some extremely questionable proceedings in connection with the New York and New Haven Railroad by which he fraudulently issued over a million of stock to himself and friends.³

Although not one of the original directors Mr. William H. Osborn soon became interested in the Illinois Central, and from the retirement of President Schuyler in 1853 to the acquisition of the southern lines in 1882 he was the dominant figure in the history of the company. A man of great ability and strong personality, with a broad grasp of affairs, he won the absolute support of stockholders, employees, and shippers, and for over twenty years English and Dutch shareholders gave him their unqualified proxies, thus entrusting to him the complete control of the Illinois Central. So well did he execute this trust that even during the periods of deepest depression they did not condemn his management of the road. The company owes more to Mr. Osborn than to any other person connected with it.⁴

The remaining directors were prominent business men, but

²Ackerman, *Historical Sketch of the Illinois Central Railroad*, pp. 27-36; *Chicago Daily Democrat*, January 16, 1851.

³Ackerman, *Historical Sketch of the Illinois Central Railroad*, pp. 57-60; cf. Chap. vi.

⁴Ackerman, *Historical Sketch of the Illinois Central Railroad*.

they did not exert such an influence upon the management of the property, as did Rantoul, Schuyler, and Osborn. With one or two exceptions, they are practically unknown to-day.⁵ However, as has been the case with most of their successors in the directorate, they took an active interest in the affairs of the corporation, and much of the financial success of the railroad is due to their hard and consistent work in directing the construction of the road and watching over the financial operations.

With such a strong group of promoters, the active work of organization followed closely upon the chartering of the company. It is very probable that a preliminary organization had been created some months before the charter was actually secured. According to the provisions of the charter the promoters were allowed sixty days to accept it and immediately upon receipt of the act steps were taken to complete the regular organization. However, Governor French was ex-officio a director, and as there were many matters of interest to the state, action was deferred until his arrival.⁶ Finally, on March 19, 1851, the incorporators met in a little dimly lighted room at 1 Hanover Street, New York City and there formally organized the Illinois Central Railroad Company by accepting the legislative act of February 10th, by making provision for the various requirements of the charter, and by electing Robert Schuyler president.⁷

The records of the following meetings have never been made public, but from newspaper reports, it seems that active work was not long delayed. One million dollars of stock was subscribed, later another million was taken, and enough was paid in to allow Mr. Ketchum, the treasurer, to deposit the guarantee fund of \$200,000 required by the charter; officers of the company were elected; arrangements were made for active prosecution of the work in Illinois; negotiations were opened

⁵Ackerman, *Historical Sketch of the Illinois Central Railroad*, pp. 21 ff. Credit for the success of the company should also be given to the English and Dutch stockholders. Up to comparatively recent date the Illinois Central was owned largely by foreign stockholders and these shareholders have always kept a close watch on the affairs of the company. At times there has been friction between the stockholders and the management in this country, but on the whole, much of the success of the railroad is due to the active cooperation of the English investors. This was especially true in the early history of the company.

⁶*Ibid.*, pp. 21-60.

⁷*Ibid.*; *Chicago Daily Democrat*, March 10-30, 1851.

with the federal government in regard to the land grant; and a definite financial program was prepared.⁸

The charter provided that work should commence on the main line not later than January 1, 1852, and, as the entire route of the road had to be determined long before that date, there was no time for delay. On March 22nd, or only three days after the organization of the company, Mr. Roswell B. Mason, the Engineer and General Superintendent of the New York and New Haven Railroad, better known on account of his career as mayor of Chicago, was appointed Engineer-in-Chief and given entire charge of construction work in Illinois.⁹ At that time there were few men who had had either a practical or theoretical training in railway civil engineering, and the selection of an efficient engineering staff was by no means an easy undertaking. But good pay, the importance of the new railroad, and the high reputation of Colonel Mason overcame the difficulty, and by the middle of May, a staff of about seventy engineers had been collected and were on their way to Chicago.¹⁰

The party arrived in Illinois on the 17th of May, and the work of preliminary survey was immediately started. Only five specific points were given in the charter, viz. Galena, Chicago, Cairo, southern terminus in the Illinois and Michigan Canal, and Dubuque. The only other restrictions upon the route were that the line should pass within five miles of the northeast corner of Township 21, range 2, east of the third principal meridian; should not vary more than seventeen miles either way from a straight line from Cairo to the southern terminus of the canal; and that the Chicago branch should not be north of the parallel of 39 degrees and 30 minutes.¹¹ Otherwise, the company had entire latitude in locating the route.¹² As has been the case with practically every new railroad in this country, various towns entered upon a bitter contest for the new railroad. In the present instance sectional rivalries had been fanned into a fierce flame by fifteen years of agitation. So intense was this competition that the legislature could not decide the route and left the controversy to the railroad.¹³

For the main line from Cairo to La Salle there had been

⁸Cf. Chap. vi.

⁹Ackerman, *Historical Sketch of the Illinois Central Railroad*, p. 82.

¹⁰*Ibid.*

¹¹Charter of February 10, 1851, sec. 15, ¶ 3.

¹²*Ibid.*

¹³Cf. Chap. II.

but a single route proposed since 1835, namely the present line, passing through Du Quoin, Vandalia, Decatur, and Bloomington. The "southern terminus" of the canal was in dispute between La Salle and Peru, each claiming that it was the legal terminus and consequently the end of the railroad. From La Salle to Galena there were two possible routes, one passing through Freeport and the other through Savannah. Local committees were appointed to bring pressure on the officials; offers of free right of way and liberal city franchises were made, and even railroad bridges and short sections of track promised, if only the railroad would build through particular districts. Shelbyville was insistent upon the advantages of that place as a point on the main line, as also the junction of the Chicago branch, while the controversies between Peru and La Salle, and Savannah and Freeport became extremely bitter. Each of these places took active measures to secure the railroad and even went so far as to institute legal proceedings to force the company to choose the particular location desired by the litigant.¹⁴ In the midst of this "down state" controversy the territory around Chicago was aroused by a rumor that the "Central" was intending to pass by that city and run its line from a junction with the Michigan Central at the state line near what is now Hammond, directly southward along the state border to Jonesboro.¹⁵ But threats, bribes, and litigation alike had little influence upon the management, and it proceeded to lay out the route without heeding the demands or threats of the various rival towns along the proposed right of way.

For the purpose of surveying the various routes Colonel Mason divided the territory into seven general divisions, each with the usual surveying party, and within a few days after the engineers had reached Chicago the surveys were actually commenced.¹⁶ It was spring in Illinois and to the usual disadvantages of reconnoissance work on the frontier were added the inconvenience of Illinois mud and rain. Mr. Mason himself took an active part in the work and spent all the time he could spare from affairs at Chicago to obtain first hand information. Thus, by the middle of summer he was in a position to make a decision as to the route.¹⁷

¹⁴*Chicago Daily Democrat*, May 15, July 23, 1851.

¹⁵*Ibid.*, May 15, 1851.

¹⁶Ackerman, *Early Illinois Railroads*, p. 82.

¹⁷*Ibid.* For an interesting description of the difficulties connected with the construction of the road, the reader is referred to Mr. Ackerman's account, *Early Illinois Railroads*, p. 82.

In deciding the route there were four important considerations: (1) As the company could not take land more than fifteen miles from the tracks it was not desirable to run the line through thickly settled regions where much of the land granted the company by the federal government had already been occupied. (2) The road should be so located as to build up the largest and most profitable traffic possible. (3) Wherever practicable there should be a minimum cost of operation, and all grades, curves, and sections involving heavy maintenance work, should be avoided. (4) Finally, the cost of construction should be confined to the lowest amount consistent with safety and good operating efficiency; expensive rights of way, heavy masonry work, long bridges, extensive gradings, and other costly work were decidedly undesirable.

Thus, the company selected the route entirely upon its economic and engineering merits and, with slight exceptions, the line chosen was the most direct and shortest of the possible routes. From Cairo to Freeport the railroad was as straight as practicable, only slight variations being made to include the important towns of Vandalia, Decatur, Bloomington, La Salle, and Mendota, and there is one stretch of track south of La Salle which extends sixty miles without a curve. The Chicago branch from the junction with the main line at Centralia, was also almost straight, and for the entire distance of two hundred and fifty miles only three curves, and those of large radius, were necessary. In selecting the route from Dixon to Galena, the preference was given to Freeport instead of Savannah; and the present line of the Chicago branch was decided upon in preference to the line farther east. With the various disputed points decided, the total length, according to Colonel Mason's first report, was 699 miles.¹⁸

The questions connected with the route having been settled, the engineers were free to spend their entire time in completing the surveys and preparing the preliminary estimates of cost of construction. Work progressed rapidly, and by September 1, 1851, a preliminary report covering both amount and cost of construction work was submitted to the president.¹⁹ Heavy T rails, light grades, easy curves, well built embankments and fills, ample cuts, and brick or stone buildings were to be provided,

¹⁸Report of President Schuyler to Directors, September 12, 1851, in *Documents Relating to the Organization of the Illinois Central Railroad*.

¹⁹*Ibid.*

and everything was to be of the highest standard consistent with the light traffic conditions which would prevail on a western railroad.²⁰ Although built over the level prairies of Illinois, an average of thirty thousand cubic yards of earth was to be used per mile on embankments and fills.²¹ Including equipment and all construction expenditures, the total cost was estimated at \$16,537,212, or \$23,700 per mile.²² Even this liberal amount proved to be insufficient and the final cost exceeded the preliminary figures by some ten millions of dollars.²³

The surveys were hastened as much as possible, but the final results were submitted none too soon. According to the charter, the main line was to be completed within four years from February 10th, 1851, and the branches within six years, while work on the main line was to be commenced by January 1st, 1852; therefore, it was imperative that the construction should not be delayed.²⁴ Nor was the undertaking an easy one to complete within this short period. Large construction companies did not then exist; rails, chairs, fastenings, and bridge iron had to be imported from England, and other supplies carried west from New England, New York, and Pennsylvania; the amount of grading was very great; and labor was far from abundant.²⁵ Thus, even aside from any financial difficulties, the question of building the road within the time limit was very perplexing, and the directors, as well as Colonel Mason, were forced to pay close attention to construction work in Illinois.

Among the various questions which occupied the attention of the directors was the one "by whom and in what way should the road be built". As early as April 23rd, 1851, a Mr. Franklin, for several years railroad engineer for the Russian Government, offered to build the Illinois Central Railroad and take bonds in payment on very liberal terms.²⁶ Even before that date it was rumored that private corporations were willing to

²⁰Report of President Schuyler to Directors, September 12, 1851, in *Documents Relating to the Organization of the Illinois Central Railroad*; also charter, Illinois Central Railroad, sec. 15, ¶ 3.

²¹*Ibid.*

²²*Ibid.*

²³*Ibid.*; cf. Chap. VI.

²⁴Charter, Illinois Central Railroad, sec. 15, ¶ 3; *ibid.*, sec. 23.

²⁵Cf. Chap. II. Practically no railroad material was made in this country, and it had to be imported from Europe.

²⁶*Chicago Daily Democrat*, April 23, 1851.

undertake the construction of large portions of the road.²⁷ But the work was entirely beyond the capacity of any private construction company and the officials of the Illinois Central wisely determined either to build the road themselves or else to let the work out in small sections. This conclusion was reached early in 1851, and Colonel Mason's estimates, therefore, were made with that end in view.

Although the preliminary engineering estimates were submitted by the first of September, the final estimates were not submitted until much later, and it was impossible to start active construction work on the main line that fall. However, in accordance with the letter of the charter, the Illinois Central, on December 23rd, 1851, broke ground at both Cairo and Chicago, and amidst elaborate ceremonies, the salutes of cannon, and the ringing of bells, formally commenced the construction of this great enterprise.²⁸ During the winter contracts were made for supplies, the federal land survey was completed, arrangements were made for transfer of the land to the company, and other preliminary work was completed.

Specifications had been prepared during the winter, and on the 15th of March, 1852, the company invited bids for the construction of divisions 1, 2, 6, 8, 9, and 10. The proposals were to include grading, masonry, bridging, superstructure for the entire division or a part of the same, or merely for a single item, such as grading, if desired.²⁹ Bids could be entered with or without material. The terms were one-half cash and one-half seven per cent bonds at par, with the usual arrangement in regard to inspection, completion within a specified period, and other matters. At the time the contracts were placed the credit of the road was exceptionally strong, and there was a ready response on the part of contractors, both in Illinois and the eastern states. Men even came on from Europe and there was not a section of the line that was not bid for several times. As a

²⁷*Chicago Daily Democrat*, April 22, 1851. Cf. this method with the Credit Mobilier in the Union Pacific and the Construction company in the Iowa Falls and Sioux City, *infra* Chap. IV.

²⁸*Cairo Sun*, December 25, 1851.

²⁹*Chicago Daily Democrat*, April 23, 1851; *ibid.*, March 25, 1852. To facilitate the work of construction, the road was divided into twelve divisions, varying in length from fifty to seventy-five miles, according to the character and extent of the grading and bridging. Over each division was placed a division engineer, whose duty it was to supervise the individual contracts and direct the construction done directly by the company.

result the bids were low and the terms favorable to the company. This permitted the railroad to let the work out at reasonable figures. In many cases the division contractors sub-let part of the work. The strong competition between bidders, and the financial standing of the company, prevented letting the work at excessively high prices and the Illinois Central was built as cheaply as could have been expected under semi-frontier conditions.³⁰

Contracts for the first six divisions were let early in June, 1852, and bids for the 3rd, 4th, 5th, 7th, 11th, and 12th divisions were accepted later in the summer. Work was commenced immediately on the 3rd, 4th, 5th, and 7th divisions, but the 11th and 12th were not pushed until two years later.³¹ The bids included only the grading and part of the bridge construction; the company itself laid the rails and erected most of the buildings.³² Thus, by the end of October, 1852, the entire road, with the exception of 52 miles north of the Big Muddy River, where the contractors had given up their work, was under contract and active construction had been started.³³

The affairs of the Illinois Central at Chicago did not proceed as smoothly as in the southern and central parts of the state. Railroad matters in that city had been in a thoroughly demoralized condition for many months prior to the passage of the charter, and the company was forced to take a hand in local railroad controversies and also in municipal politics in order to secure adequate terminal facilities and a city franchise. The conflict between the Lake Shore and Michigan Southern (then the Southern Michigan) and the Michigan Central involved the Illinois Central in the greatest difficulties.

For several years these two railroads had been keen rivals in Michigan and northern Indiana, and during the year 1850 they had extended their tracks to within a few miles of Chicago. Each endeavored to secure an independent entrance to the city

³⁰Advertisement in railroad journals, March, 1852; also *Chicago Daily Democrat*, March 25, 1852. There was undoubtedly a small amount of mismanagement in the construction of the road, but the amount was small. Some of the directors were interested in contracts with the company, but there is no evidence to show that they used their official positions to defraud the company. For a full discussion of these points, cf. Chap. vi.

³¹*American Railroad Journal*, October 25, 1856.

³²*Ibid.*

³³*Ibid.*

and to prevent its competitor from obtaining a similar right. The result was a bitter fight in the legislatures of Illinois, Michigan, and Indiana, in the common council of Chicago, in municipal politics of that city, and even between groups of workmen along the tracks.³⁴ The companies were of equal strength, and neither could secure a charter from the state of Illinois or a franchise from the city. Despite all their efforts the two railroads, in 1851, were halted at the Illinois state line.

The charter for the Illinois Central was before the legislature at this time, and the Michigan Central allied itself with the promoters of this road, hoping, thereby, to secure the coveted entrance to Chicago. The influence of the Michigan company was brought to bear on the legislature, and it is very probable that financial assistance was extended to the promoters of the new company. The charter was eventually passed, and the Illinois Central was allowed to make connections with other railroads.³⁵ At the time, it was commonly understood this provision applied to the Michigan Central.

Very soon after the "Central" was organized rumors began to arise that the two companies were to form some kind of a connection by which the Michigan corporation would enter Chicago over the tracks of the Illinois Central. However, these rumors were groundless and nothing more was heard until the Illinois Central itself commenced surveys southwest of the city towards the Indiana state line and the Kankakee River.³⁶

While these preliminary surveys were being completed, the company was making special efforts to secure an ordinance admitting it to the city of Chicago. Mr. Brayman, of Springfield, and Representative Bissell, of Belleville, had been appointed solicitors of the company in Illinois and on July 12, 1851, the latter, in connection with representatives of the Michigan Central Railroad, presented a petition to the city council of Chicago asking permission to lay down tracks within the city limits.³⁷ A few days later, this memorial was withdrawn for revision on account of opposition in the council.³⁸

Three months later Colonel Bissell submitted a second me-

³⁴Cf. *Chicago Daily Democrat* during the latter half of the year 1850. Mr. Wentworth, editor of the *Democrat*, took an active part in the controversy.

³⁵Charter, Illinois Central Railroad, sec. 11.

³⁶*Chicago Daily Democrat*, May 21, 1851.

³⁷*Ibid.*, July 13, 1851.

³⁸*Ibid.*, October 17, 1851.

morial.³⁹ Although the construction of the Illinois Central was regarded as one of the most important events in recent state history the city council, and to a less extent, the daily newspapers, were hostile to the company. The strife over the Southern Michigan-Michigan Central entrance had been so bitter that the supposed alliance between the Illinois Central and the Michigan Central brought upon the former suspicion and even opposition. So strong was the feeling that, upon a mere rumor that the "Central" was planning to build a cut-off to Joliet, thus establishing a rival railroad center near the Indiana line, a resolution was introduced into the city council of Chicago, disapproving such a policy and bitterly attacking the Illinois company.⁴⁰ The element opposed to the Michigan Central was strong enough to pass the resolution and, in addition, appropriate ten thousand dollars to be used in preventing the establishment of the Joliet cut-off.⁴¹ This action was commonly attributed to representatives of the Southern Michigan Railroad, and immediately after the passage of the resolution copies were printed and scattered broadcast throughout the eastern states, England, and Holland to hinder the floating of the Illinois Central loan.⁴² The city council soon found that their action was uncalled for, and a few days after the passage of the original measure it reconsidered the matter, modified the extreme statements of the first resolution,⁴³ and adopted a more conciliatory policy toward the three railroad companies.⁴⁴

Despite the distrust and hostility shown in the action of the council, Colonel Mason and Solicitor Bissell again presented their petition for an entrance to the city. After a careful consideration of the various routes the company asked for an entrance along the lake front. The railroad was to be built northeast from Lake Calumet, now Kensington, to the southern limits of the city at what is now 53rd Street. This, of course, was outside the old city boundaries. From Hyde Park to Park Row, 12th Street, the company was to have permission to place its tracks along the lake shore and could purchase what land it

³⁹*Chicago Daily Democrat*, October 17, 1851.

⁴⁰*Ibid.*, October 13, 17, 1851.

⁴¹*Ibid.* The files of newspapers for the days in which this resolution was printed are unobtainable and the only information to be found in regard to the same comes from editorials of a later date.

⁴²*Ibid.*

⁴³*Ibid.*

⁴⁴*Ibid.*

needed from private owners of real estate. From Park Row to the Chicago River the railroad was to receive from the city a five or six hundred foot right of way just east of Michigan Avenue. In return for this grant, the company agreed to provide permanent protection, in the form of levees and piling, against the encroachments of Lake Michigan. This protection was to extend from Hyde Park to the Chicago River.⁴⁵ When the petition of the company was presented, the city had provided practically no protection against the lake, and most of the territory north of the city limits and east of the present Illinois Central tracks was submerged land.

Sixty years ago Michigan Avenue was the aristocratic residence street of Chicago and the proposition to run a steam railroad along the avenue provoked strenuous opposition from the property owners, who believed it would destroy the value of their investments. On the other hand, the north and west wards had, for years, paid heavy taxes to protect the lake shore from encroachments of Lake Michigan, and that portion of Chicago gladly supported the Illinois Central plan. They argued that the city was poor and the assumption by the railroads of the expense of maintaining the south side levees would more than compensate for any depreciation in the value of residence property in the neighborhood.⁴⁶ Mass meetings and parades were held by each side; circulars and petitions were widely circulated; the newspapers took an active interest in the matter; and both sides threatened to resort to legal proceedings to gain their point. The fight was carried to the city council and this subject occupied the attention of the members during the entire month of December. The Illinois Central finally gained the upper hand and on December 29, they secured the passage of the ordinance by a close vote of ten to six.⁴⁷ The main features of the franchise were those embodied in the petition of the company with some minor exceptions. Among these was a reduction of the right of way from 12th Street to the river to three hundred feet. The restrictions upon the company were also made more severe.

The decision of the city council did not settle the fight. Walter Gurnee was Mayor at the time, and on account of a number of minor objections to the ordinance as passed, and also on account of his general opposition to the policy of the measure,

⁴⁵*Chicago Daily Democrat*, December 3, 1851.

⁴⁶*Ibid.*, daily notices during December, 1851.

⁴⁷*Ibid.*, December 30, 1851.

he vetoed the franchise.⁴⁸ The matter was again taken up in the council and that body passed the ordinance over his veto.⁴⁹ The document was immediately forwarded to the directors of the company in New York for their approval, but on the very day on which the papers left the city, the whole matter was reconsidered by the council. The two opposing parties compromised their differences and a new franchise, agreeable to the south side wards, was passed. It was signed by Mayor Gurnee and forwarded to New York three days after the first ordinance.⁵⁰

The original franchise had been duly received in New York and the directors of the company, unaware of the amending measure and well satisfied with the provisions, accepted the old franchise.⁵¹ Three days later, much to their astonishment, there appeared the second ordinance. Although similar in most ways to the petition of the company there were some new restrictions upon the company which the directors did not desire to accept, and consequently the board declined to accept it and preferred to wait for more favorable legislation.⁵²

Supposing the first measure had definitely settled the questions under dispute in regard to an entrance into Chicago the President immediately directed the engineers to commence active construction work from Chicago to the state line. When the second ordinance was not accepted, the company, of course, had no legal right to enter the city, but rather than delay matters it was determined to complete the railroad from Lake Calumet to the city limits at once. There was practically no danger of not obtaining a proper entrance to the city, and the construction of this section would provide the Michigan Central with its much desired entrance into Chicago without a protracted delay.⁵³ Much of the ground south of the city limits, especially near Lake Calumet and Woodlawn, was low and marshy, and this made it necessary to place the tracks on trestle work at considerable additional expense. Rails and ties had been ordered in the fall of 1851 and by January, 1852, the first shipments had arrived. Grading and other preliminary work was commenced in December, and the combined energies of the Michigan Central and

⁴⁸*Chicago Daily Democrat*, January 1, 1852.

⁴⁹*Ibid.*, January 3, 1852.

⁵⁰*Ibid.*, January 6, 1852.

⁵¹*Ibid.*, January 10, 1852.

⁵²*Ibid.*, March 12, 1852.

⁵³*Ibid.*, January 10, 1852.

Illinois Central were exerted to finish the line from the Indiana border to Lake Calumet and from there to Hyde Park.⁵⁴ Construction was continued when possible during the winter, and as soon as the weather permitted both companies placed large gangs of men at work. By May 1 the railroad was within eight miles of the city limits,⁵⁵ and three weeks later that short stretch was completed. On the twenty-first of the month, the first train, hauling gravel and construction materials, left Calumet and ran to the city limits.⁵⁶ Temporary freight and passenger stations had been established just outside the limits and on the morning of May 22 this first completed section of the Illinois Central was formally opened, and a passenger train was run from Chicago to the state line.⁵⁷ Regular freight and passenger trains were placed in service a few days later. The Michigan Central made use of the tracks of the Illinois Central from Calumet to Chicago, and this piece of roadbed became the final link by which the former company established a through line from Chicago to the East.⁵⁸

The tracks from the city limits south were not completed without several sharp fights with the Southern Michigan. That company opposed the construction of the road and endeavored to prevent the Illinois Central from crossing its tracks. It demanded that the latter company put in an overhead crossing at what is now Grand Crossing, which was refused. The difficulty could not be settled and each company refused to allow the other to put in any crossing at all. Finally the Illinois Central impatient of this delay sent laborers to build the crossing under cover of night. The Southern Michigan was taken by surprise, its watchmen were overpowered, and the grade crossing was finished before morning. The Michigan company was forced to accept the situation and the last obstacle to the completion of this section was removed.⁵⁹

This steady construction work, carried on regardless of the warring factions in the Chicago city council, exerted a strong

⁵⁴Ackerman, *Early Illinois Railroads*, p. 82.

⁵⁵*Chicago Daily Democrat*, May 3, 1852; cf. March 25, 1852.

⁵⁶*Ibid.*, May 22, 1852.

⁵⁷*Ibid.*, May 23, 1852; Ackerman, *Early Illinois Railroads*, p. 85.

⁵⁸*Ibid.*; also advertisements of train service in Chicago newspapers after June, 1852.

⁵⁹*Chicago Daily Democratic Press*, April 30, 1853. The matter of Grand Crossing was a sore point between the two roads for several years. Within a few weeks after the crossing was put in, a bad accident occurred

pressure upon that body. This influence was further strengthened by vague rumors of a cut-off from Joliet to Calumet which would divert a considerable traffic from Chicago proper.⁶⁰ No attempt was made to press the franchise question until the twentieth of April, only a month before the railroad reached the city limits. Local objections still continued, but the pressure of the Illinois Central and Michigan Central overcame this opposition, and, finally, on June 14th, 1852, the common council reenacted the first ordinance originally passed on December 29. The railroad was admitted to the city via the lake front route and was granted a three hundred foot right of way from Hyde Park to the Chicago River. In return for this grant, the railroad assumed the responsibility of protecting the lake shore along its right of way, and agreed not to put up any permanent buildings from Park Row to Randolph Street. Certain other obligations and restrictions were imposed upon the company, but, in the main, the franchise greatly favored the railroad.⁶¹

With subsequent purchases of land between Park Row and the river, partly from private owners and partly from the federal government, the Illinois Central secured probably the finest terminal property possessed by any single railroad in the world. Its stations and shops were situated in the heart of the city and its right of way between Grand Crossing and the river was not crossed by a railroad and for most of the distance not even by a highway. From the standpoint of the railroad, the right of way along the lake front was of almost inestimable value; from the standpoint of the public, there is much to criticise in having the otherwise splendid lake front marred by smoky trains and unsightly railroad tracks, but it must not be forgotten that in the early fifties the bargain was in favor of the city. In protecting the many miles of shore line from the river to Hyde Park the railroad assumed a responsibility that was both troublesome and expensive, while the city was relieved of expenditures amounting to tens of thousands of dollars a year, not an inconsiderable item for the Chicago of 1850. Nor must it be forgotten that this easy and uninterrupted entrance to the very

in which several lives were lost, and the two companies accused each other of having been to blame for not putting in an overhead crossing. However, evidence seems to show that both companies were equally to blame. Cf. articles in *Chicago Daily Democratic Press*, April 30, 1853.

⁶⁰*Chicago Daily Democrat*, May 3, 15, 1852; Ackerman, *Historical Sketch of the Illinois Central Railroad*, p. 81.

⁶¹*Chicago Daily Democrat*, May 3, 15, 1852; Ackerman, *Early Illinois Railroads*, p. 85.

heart of the business district has been an important factor in the industrial development of the city.

Once the legal difficulties were removed, the work of construction proceeded rapidly. Rails, ties, and piles were already on hand and within a few weeks after the passage of the franchise admitting the railroad to the city, the track was extended to Twelfth Street. Temporary freight and passenger stations were built there and used until the permanent structures were finished. Much of the right of way was under water and heavy expenditures were necessary to put the tracks in a safe condition. The rails were laid on trestle work for nearly the entire distance from Hyde Park to Randolph Street and beyond the right of way a temporary breakwater of piling was erected. The pile and trestle work was to be filled in at a later time when the company's finances would justify the outlay.⁶²

The company also purchased large quantities of land in the heart of the city near Randolph Street and expended something like \$250,000 in purchasing urban property, in addition to half a million more expended on the lake shore protection, virtually purchase money for the generous right of way granted by the city.⁶³ At the foot of Randolph Street on land purchased from the federal government, the company, in 1853, commenced the erection of its famous Chicago passenger station, the total cost of which was over a quarter of a million of dollars. At the time it was the most expensive railroad station in the country. The facilities for handling passengers were excellent, and there was an abundance of room. The building was used jointly by the Illinois Central, Michigan Central, and Chicago, Burlington and Quincy railroads, and the top floor of the station was used as a general office. North of the passenger station, the company erected a large in-and-out freight house, which was also the largest depot of its kind in the country, and the largest brick or stone building in the city. At Fourteenth Street, near the present Park Row passenger station, were placed the terminal shops, roundhouses, and cleaning yards. Then, in 1856, the Fourteenth Street works of the American Car Company of Chicago were purchased and after that date most of the heavy engine and car

⁶²Ackerman, *Historical Sketch of the Illinois Central Railroad*, pp. 80-85; *Annual Report*, Illinois Central Railroad, 1855; Chicago newspapers, 1852. The breakwater and trestlework were not filled in until after the Chicago fire of 1871.

⁶³*Annual Report*, Illinois Central Railroad, 1855-1860. *Chicago Daily Democrat*, January 1, 1852-1860. Cf. Chap. vi.

repairs on the system were handled at these shops. A number of locomotives and cars were also built by the company at the new works. By 1855, nearly a million dollars had been expended by the company for construction, right of way, lake shore protection, buildings, and other terminal improvements in the city limits. The work was continued during the following five years, in which time an additional million was spent on the Chicago terminals.

Moreover, on June 23rd, 1852, the company had secured an amendment to its charter permitting it to build a railroad from Twelfth Street to the south branch of the Chicago River.⁶⁴ This road, known as the St. Charles Air Line, served as an inner belt railroad for the Illinois Central, Michigan Central, Lake Shore, Chicago, Burlington and Quincy, Galena and Chicago Union, Chicago and Rock Island, and Chicago and Northwestern railroads. It was built by the Illinois Central and was completed in 1856 at a total cost of \$50,000.⁶⁵

● While these large expenditures were being made at Chicago, work on other portions of the system was not neglected. The company had little difficulty in securing the right of way and station ground needed. Nor was there much trouble in obtaining village and town franchises. The Illinois Central created a majority of the villages and towns along its tracks, and it held the grounds before there was any municipal organization. The only opposition to granting a franchise was at Galena. The railroad, under both the state and Holbrook projects, terminated at that city, and the citizens were bitterly opposed to the extension of the line to Dunleith. They realized that the construction of the "Central" to that point meant disaster to their business interests. Since the extension of the road was an essential part of the state charter and of the act of Congress conferring the land grant, there was no possibility of changing the provision. The city, however, placed numerous obstacles in the way of the railroad, and for several months refused to give the company a franchise. These tactics, of course, were childish, and the city council finally yielded. The railroad received the right to enter Galena, but only with many conditions and restrictions.⁶⁶

⁶⁴*Session Laws of Illinois*, 1852-1853, June 23, 1852.

⁶⁵*Annual Report*, Illinois Central Railroad, 1855-1857. The Illinois Central subsequently sold three-fourths of its interest in the St. Charles Air Line to the Michigan Central, Chicago, Burlington & Quincy, and Chicago & Northwestern.

⁶⁶The following is taken from the *Chicago Daily Democratic Press*

The matter of local franchises did not interfere with the commencement of construction work, and, as noted above, contracts for the entire road were let in the spring and early summer of 1852. The Illinois Central was more fortunate than most of the roads of the time in that it had considerable resources upon which it could draw at a moment's notice. The sale of the four million loan of February, 1852, and the five million sterling loan of June, the same year, together with subscriptions by the stockholders, provided ample funds for starting the work. Part of the later loans, especially the Free Land issue of 1855-56, were placed at a considerable discount, but the money market fluctuations which brought this condition to pass, did not seriously interfere with the loans. Moreover, the capital stock of over fourteen million dollars was issued subject to assessment, and the directors always had this to fall back upon in emergency. Thus, at all times, the company had either in hand or in sight, whatever funds were necessary to carry on the enterprise in the most economical and expeditious manner. Economy and good management were always observed, but the directorate was also in a position to push the work as much as possible. Materials and labor were paid for in cash or bonds equivalent to cash and payments were met promptly. With the exception of a few weeks after the assignment of 1857, all bills, contracts, notes or other obligations were liquidated when due, and the credit of the company was always high.⁶⁷ This condition was a decided contrast to the "hand-to-mouth" policy pursued by such southern roads as the New Orleans, Jackson and Great Northern or by western lines like the Ohio and Mississippi, and it enabled the Illinois Central not only to finish the work within the limits set by the charter, but also to carry on the enterprise at a comparatively low cost.⁶⁸

of March 15th, 1853:—"Permission is given the Illinois Central Railroad (by the city of Galena) to lay down and operate a road through the city upon a prescribed line, by locomotive engines. Permission was given the company to bridge Galena river within the limits of the city and a portion of the levee, three hundred feet in length, was appropriated for their use. The usual regulations in regard to use of streets, etc. were inserted. The company will spend \$10,000 under the direction of the city authorities for dredging the stream in front of the depot grounds."

⁶⁷As stated in Chapter vi, the assignment did not affect the credit of the Illinois Central to any great extent. The great bulk of the construction work was finished in 1855; the floating debts that could not be met were only indirectly related to contracts for construction.

⁶⁸In Chapter vi a statement is made that the company was forced to

Nevertheless, the management in Illinois was involved in several difficulties during this period. The most important related to the contracts for material and labor. The road was let to contractors in the spring and summer of 1852, and at that time Illinois Central seven per cent bonds were selling at a slight premium. Accordingly, the directors stipulated that the terms for all work be one-half cash and one-half seven per cent bonds at par.⁶⁹ This arrangement was accepted, and the first payments were made on such a basis. The contracts were also based on the prices prevailing in 1852, and on account of the competition between bidders they were taken at low figures. During 1853 and 1854 the price of bonds, materials, and labor remained approximately the same as in 1852. But about the time of the Schuyler frauds various influences combined to depress the quotations of Illinois Central bonds, while rising prices increased the cost of railroad supplies and labor throughout the entire country. This was especially severe in Illinois on account of the large amount of railroad construction and the abundant crops, which made enormous demands for unskilled labor. Naturally, the contractors were unwilling to stand the decline in bonds and increased cost of construction, and asked for additional compensation from the company. Where definite contracts had been made the management refused to make any radical changes. Most of the contractors, however, had taken up the work in such a way that the company could not force them to continue at the old terms, or else did not feel it desirable to do so. Under the circumstances, the provision making half payment in bonds was not carried out, and the payments to the contractors were largely increased. In spite of this reasonable action by the railroad many contractors surrendered their contracts and threw the unfinished work back upon the company.⁷⁰

pursue a hand-to-mouth financial policy. This was true; at the same time there were always sufficient funds in the treasury to meet the contracts when due. The condition was similar to what occasionally exists on any large railroad when financial stringencies prevent the floating of bonds at favorable terms and the company is forced to sell short term notes at a discount. However, this lack of funds very seldom affects employees of the company or creditors, although it does make any new work more expensive on account of the difficulty of obtaining cash.

⁶⁹*Chicago Daily Democrat*, March 25, 1852; also advertisements.

⁷⁰*Cairo Mirror and City Directory*, 1864, 1865; letter of W. H. Osborn, dated, N. Y., Oct. 16, 1855, quoted in *Railway Times*, November 10, 1855; official communication from the Board of Directors, dated November 7, 1854, quoted in *Railway Times*, November 25, 1854; Satter-

In most of these cases the directors did not enter into new contracts, but carried on the work under its own division superintendents. The portions of the line surrendered were the most difficult, and the responsibility placed upon the company's engineers was large. The most important of these divisions were the ones from Cairo to Carbondale, and those near Decatur.⁷¹ But the same difficulties which enhanced the cost to the contractors made the work more expensive for the company. As most of the responsible work, such as bridges, trestles, buildings, culverts, and the heaviest pieces of grading, was performed directly by the railroad the advance in prices had an important effect. As high as \$1.50 per day was paid for ordinary section labor and proportionate wages for skilled workmen.⁷² The result of greater wages and prices on company work and larger compensation for contractors was a general advance in the cost of building the road, amounting to several millions of dollars. The estimate made by Colonel Mason was found to be much too low. At about the same time between one and two million of bonds, taken by contractors in 1852 and 1853, were returned to the company in such a way that the market for Illinois Cen-

thwaite's Report, *Railway Times*, July 22, 1854. The greatest difficulty was experienced in the division north of Cairo and near Decatur.

The Illinois Central profited by the depression and fluctuations in prices of labor and supplies. The following statements taken from the report of Mr. F. E. Satterthwaite, American correspondent of the *Railway Times*, in the number for July 22, 1854, are interesting: "The first thing done was to buy the iron for the whole road at \$45 per ton for bonds at par. In six month after the purchase the value of iron doubled, by which the company saved \$1,500,000. The high character of the company and the rapid progress of the road commanded confidence so that the company was enabled to sell the whole of the \$17,000,000 at par (sic), with the exception of the February (1854) issue. The sales were made payable in instalments which will be completed in July next. . . . " Mr. Satterthwaite undoubtedly exaggerates the profits made from buying the iron and other supplies, nevertheless the saving was considerable. For instance, the N. O. J. & G. N. paid \$85 per ton for poorer rails than those for which the Illinois Central paid \$45, but this was affected slightly by the lack of confidence in the southern road. There was also some saving made in contracts, which the contractors were forced to live up to.

⁷¹*Cairo Mirror and City Directory*, 1864, 1865; official communication from the Board of Directors, November 7, 1854, quoted in *Railway Times*, November 25, 1854.

⁷²*Ibid.*

tral securities was depressed and, consequently, it was harder to secure money.⁷³

Aside from these difficulties, the management had little to contend with beyond the general engineering problems involved in such an extensive enterprise. The prairies of Illinois offered an almost ideal location for a railroad, and except for somewhat difficult construction on three or four divisions, the building of the road proceeded without serious delays. Even in the bluffs along the Illinois and Cache rivers the engineering problem was extremely simple compared with the building of the Union Pacific or many eastern lines. The greatest trouble was found in the distance of the work from the older parts of the country and in high cost of transportation. The labor problem was solved by the employment of foreign laborers, largely Irish. In fact the road was built almost entirely by this class of workmen. At one time nearly ten thousand men were working on the road, but the need of help on the farms and demand by other railroads prevented the "Central" from keeping all the men it needed. Rails, bridge iron, equipment, and other railroad materials were carried from the eastern states and England to Cairo, Chicago, and Dunleith by water. From those places they were either hauled by wagon across the country or else carried on the rivers, the canal, and the Galena and Chicago Union railway as near the construction work as possible and then hauled by wagon. This method, at best, was slow and expensive, and resulted in considerable delay. Supplies for the men were hauled long distances by teams, as most of the country through which the road went was sparsely settled.

By the 1st of January, 1855, all the main line and over half of the Galena and Chicago branches were in operation.⁷⁴

⁷³Most of the bonds taken by contractors were returned to the company after the Schuyler frauds, when the price of seven percents had dropped to 64.

⁷⁴The following "History of Construction" is taken from the *Chicago Daily Democratic Press*, being quoted in the *American Railroad Journal*, October 25, 1856:—"Published contracts were first made in June, 1852, and the grading of the 1st, 2nd, 6th, 8th, 9th, and 10th divisions let. On the 14th of October following the 3rd, 4th, 5th, 7th, 11th, and 12th were put under contract. In July the first instalment of the first English loan was paid and it was not until this payment had been made that the originators of the enterprise had confidence in its success. In March, 1853, Colonel Mason was elected Superintendent. On the 16th day of May the first sixty miles of the Illinois Central from La Salle to Bloomington was

During the next six months the remainder of the Galena branch, and the Chicago branch as far south as Mattoon, were finished, leaving only the line from the St. Louis and Terre Haute Railroad to Centralia, seventy-seven miles, incomplete.⁷⁵ The financial difficulties in 1855, lack of labor, and the fact that the company already had a connection with the main line by way of the Great Western from Tolono to Decatur and by the Terre Haute road from Mattoon to Pana, made it unadvisable to finish the work before September, 1856.⁷⁶ The last rail was laid on September 26.

Although formally opened in September, 1856, the railroad was only partially completed. Many of the station buildings were not built, fencing, ballasting, construction of levees and piling at Chicago, Cairo, La Salle, and Dunleith were incomplete, and much of the bridge and culvert work was of a temporary nature. The equipment was also inadequate. Thus, the expenditures during the fall of 1856 and during 1857 were very large. By the close of the latter year everything was finished, and

opened for business, and the company commenced working the road on its own account. The following are the dates of opening by sections:—

MAIN LINE, CAIRO TO LA SALLE, 308 MILES.

LaSalle to Bloomington	60 miles	May 16, 1853.
Bloomington to Clinton	23 "	March 14, 1854.
Clinton to Decatur	22 "	October 18, 1854.
Cairo to Sandoval	118 "	November 22, 1854.
Decatur to Sandoval	85 "	January 1, 1855.

GALENA BRANCH, LA SALLE TO DUNLEITH, 146 MILES.

Mendota to La Salle	16 miles	November 14, 1853.
Freeport to Warren	25 "	January 9, 1854.
Warren to Scales Mound	14 "	September 11, 1854.
Scales Mound to Galena	12 "	October 30, 1854.
Mendota to Freeport	62 "	February 1, 1855.
Galena to Dunleith	17 "	June 12, 1855.

CHICAGO BRANCH, CHICAGO TO CENTRALIA, 250 MILES.

Chicago to Calumet	14 miles	May 15, 1852.
Calumet to Kankakee	42 "	July 11, 1853.
Kankakee to Spring Creek	31 "	December 2, 1853.
Spring Creek to Pera	22 "	May 18, 1854.
Pera to Urbana	20 "	July 24, 1854.
Urbana to Mattoon	44 "	June 25, 1855.
Mattoon to Centralia	77 "	September 27, 1856. ⁷⁷

⁷⁵*American Railroad Journal*, October 25, 1856.

⁷⁶*Ibid.*

further construction work was confined to extensions and to providing for the demands of increasing traffic.⁷⁷

Compared with the present charter lines of the Illinois Central, the construction was poor and the equipment was very inadequate. Only a portion of the road was ballasted with gravel, none with stone. The embankments were narrow and the roadbed was greatly inferior to present Illinois Central standards. Bridges, culverts, and trestles were weak and unadapted to heavy loads. Freight houses were poorly arranged, and the terminal yards were mere collections of tracks, without any definite system. Locomotives, both freight and passenger, were light, the heaviest weighing only thirty tons, and all used wood instead of coal. Eight tons was the maximum load for freight cars, while the proportion of tare to net load was about one to one. In 1857 most of the coal, and some of the house cars, had only a single pair of trucks, while those possessing two trucks were classed as two cars. The passenger equipment lacked most of the conveniences now regarded as essential—steam heat, air brakes, ventilators, improved springs, automatic couplers, vestibules, good lights. No sleeping cars were included in the equipment of the road when finished.⁷⁸

However, the Illinois Central, in 1857, was the best built railroad in the West and as good as most eastern lines. The total cost of construction was \$26,568,017.61, or \$37,600 per mile, of which some twenty-one millions were expended on roadway, buildings, etc.⁷⁹ In no sense of the word could the construction work be regarded as temporary. Buildings were of a permanent character, generally stone or brick. The roadbed was well built, according to the standards of the time, and was laid with sixty pound iron T rails, placed on chairs.⁸⁰ Sidings were ample for the traffic of the period, and much of the line was adapted for double tracking. Bridges were made of iron, with stone abutments, and the culverts were generally built of stone. The line, following the original surveys, was straight and free from heavy grades or sharp curves. Terminal facilities were ample and permitted extensive additions without a large expenditure for land or right of way. The equipment was more than sufficient for the needs of the railroad when completed.

⁷⁷*Annual Report*, Illinois Central Railroad, 1855-1857.

⁷⁸*Ibid.*; cf. Ringwalt, *Development of Transportation Systems in the United States*.

⁷⁹Cf. Chap. vi.

⁸⁰The rails were of exceptionally good material and according to

Both locomotives and freight and passenger cars were up to the highest standards of the period and, with slight exception, the rolling stock was entirely new. On the whole, the railroad conformed to the provisions of the charter, and "was made equal, in all respects, to the road leading from Boston to Albany, usually known as the Great Western, with such improvements as experience has shown to be expedient."⁸¹

Mr. Ackerman some of them were in use as late as 1881.

⁸¹Charter, Illinois Central Railroad, sec. 15, ¶ 3.

CHAPTER IV.

CONSTRUCTION AND DEVELOPMENT, 1857 TO 1870.

The construction of the roadbed and buildings and the purchase of rolling stock were merely the first step in the development of the Illinois Central System. Traffic had to be secured, markets found for the products of the territory tributary to the railroad, and the agricultural and manufacturing interests of that region stimulated; an operating organization was necessary and provision had to be made for the rapid and economical handling of both freight and passenger business. As further steps there came the formation of traffic alliances with connecting or branch railroads, trackage agreements for the use of certain desirable pieces of track, organization and maintenance of pools and similar arrangements, and finally the physical extension of the railroad through the lease of old lines or the construction of new. These were the problems before the management, in 1857, and their solution is the real history of the company.

The organization of the various departments was developed gradually. During the first three years of construction the operating side was handled by the Chief Engineer, Mr. Mason, and the net receipts from the traffic went directly into the construction account. Later Mr. Mason was made general superintendent, and a separate operating department was created.¹ In 1856 Mr. Arthur was made general superintendent, in place of Mr. Mason, who resigned,² and he, in turn, was succeeded by George B. McClellan, Commander in Chief of the federal armies during a part of the Civil War. By 1855 most of the road was completed and the traffic was large enough to make a complete operating organization necessary. Accordingly traffic, maintenance of way and equipment, operating, financial, and legal departments were established under the supervision of the general superintendent. The president did not transfer his offices to Illinois until several years after the construction of the road and the board of directors has always kept New York as its

¹Ackerman, *Early Illinois Railroads*, p. 43.

²*Ibid.*, p. 44.

official meeting place. For that reason it was necessary to have some ranking executive officer in Chicago, and Mr. Arthur, Mr. McClellan, and their successors in the office of general superintendent had full charge of all operating matters, subject, of course, to the approval of the president and board of directors. Otherwise the organization of the railroad was similar to that of other companies doing the same kind of work.

As soon as a stretch of track was completed, freight and passenger service was commenced. In the passenger department the standard service was two trains a day in each direction over all important sections of the road. In addition such extra trains were run as the traffic demanded, but from 1857 to 1870 this standard of two trains a day in each direction was maintained.³ The freight traffic was more irregular and the service conformed to the special needs of the season.⁴ As freight traffic developed, it became necessary to increase the number of trains until by 1870 there was an average of five freight trains a day in each direction.⁵ By that time most of the mixed trains had been taken off, and the separation of the two branches was complete. In addition to the regular passenger service the company established a suburban service from Hyde Park and later from towns as far south as Kensington to Chicago.⁶ From the commencement of passenger service the trains carried both mail and express. According to the federal act of September 20th, 1850, the railroad was obliged to carry what mail the Post Office Department directed on terms prescribed by Congress.⁷ Mail was handled on all regular trains, and the Illinois Central became one of the most important arteries of the Post Office Department. The Adams Express company was given a monopoly of the express business in 1856, and a regular system was installed.⁸

Even before trains were put in operation it was necessary to issue tariffs. Rate matters, however, were in a chaotic condition and no formal tariff sheets were printed. In some respects the regulations as to the making of rates were much stricter than in later years. The number of different rates was small and it was an easy matter for the general superintendent or even the president to adjust the charges personally. Most ship-

³*Annual Report*, Illinois Central Railroad, 1855-1870.

⁴*Ibid.*, 1855-1859.

⁵*Ibid.*, 1870.

⁶*Ibid.*, 1856.

⁷Act of September 20, sec. 6.

⁸*Annual Report*, Illinois Central Railroad, 1856.

pers regarded railway rates in the same light as ordinary business transactions—a matter of individual bargaining, and tariffs were often adjusted by the local station agent.⁹

The railroad was just getting the various departments well organized when the development of the road and the country tributary to it was arrested by the panic of 1857, the assignment of that year, and a series of droughts and crop failures. The traffic of 1856 and the early part of 1857 promised a rapid development of the business of the company.¹⁰ In the last three or four months of 1857 shipments and earnings decreased considerably. The next year, 1858, a severe drought ruined much of the corn and wheat, and in 1859 prices for grain were so low that the farmers did not find it profitable to market their corn and wheat.¹¹ Instead of the income of the road increasing it actually declined in these two years, and the net revenue did not provide for a third of the interest charges accruing during the period.¹² New construction work was suspended, purchases of equipment cancelled, and maintenance work reduced as much as practicable, but even these savings did not prevent the decrease in net earnings. The shareholders were forced to pay assessments on their stock, and the railroad received a setback which was not overcome for three or four years.¹³

By 1860 conditions were again normal, and the first few months of 1861 were the most profitable the company had enjoyed to that time. But this prosperity was temporarily checked, this time by the commencement of the Civil War. State troops were rushed to Cairo the first week in May, and during the next four years the regular business of the railroad was constantly interrupted by the demands of the Government.¹⁴ The outbreak of hostilities destroyed southern shipments of grain and merchandise from Cairo and, for a time, checked the growth of Illinois. Traffic declined and the officials of the company were left without plans on account of the rapid change in affairs. At the same time the working force of the company was disorganized by the enlistment of men in the army and the sudden demands of the War Department for transportation of troops or supplies.¹⁵ Thousands of men were sent south to Cairo via the railroad, and immense quantities of grain, meat, ammuni-

⁹Statement of station agent at Calumet, 1857.

¹⁰*Annual Report*, Illinois Central Railroad, 1855-1857.

¹¹*Ibid.*, 1858, 1859.

¹²*Ibid.*

¹³*Ibid.*, 1860.

¹⁴*Ibid.*, 1861-1865.

¹⁵*Ibid.*; Ackerman, *Early Illinois Railroads*, pp. 45, 46.

tion, and other materials for the armies were forwarded in the same direction. In all cases precedence was given to trains carrying troops or government supplies, and the regular working of the road was constantly delayed. Moreover, these sudden calls reduced the amount of equipment available for other uses, and the company was compelled to pay heavy damages for failure to furnish cars.¹⁶

Nevertheless, the war aided the railroad more than it damaged it. The development of manufacturing in the eastern states and the needs of the army created a demand for the products of Illinois and several times as much grain was handled during the closing years of the war as in 1857 to 1860. Furthermore, the army traffic was profitable, although the provisions of the land grant act and the charter compelled the company to carry both troops and supplies at reduced rates. From 1862 until the close of the war the railroad was utterly unable to handle the freight offered it.¹⁷ As a result both gross and net earnings increased more than two fold during the conflict, and in 1865 they were sufficient to provide for dividends on all the stock outstanding.¹⁸ The same influences which brought about the traffic development of the Civil War period produced an even greater growth in the next five years, and the earnings of 1869 and 1870 were well ahead of those of any previous years.¹⁹

On the other hand the Civil War made impossible the use of the north and south trade routes. The Illinois Central was primarily a north and south railroad and the officials of the company, in 1859 and 1860, had managed to build up a fairly lucrative trade with the southern Mississippi valley states. But during the war the grain traffic of the West was sent east to the Atlantic seaboard. When the war was over the resources of the south were gone, and the company was unable to revive its north and south business for a number of years.²⁰ The prosperity of the period under discussion was unnatural, and events occurring after 1870 inflicted serious damage upon the company.

Most of the growth of business from 1857 to 1870 occurred on the charter lines of the company, but it was aided by a number of extensions and traffic alliances made at various times. The Illinois Central was built in the shape of a Y and in fact

¹⁶*Annual Report*, Illinois Central Railroad, 1865.

¹⁷*Ibid.*, 1862-1865.

¹⁸*Ibid.*, 1865.

¹⁹*Ibid.*, 1869, 1870.

²⁰*Ibid.*, 1861 ff.; *Report of the Delegates Appointed by the English and Dutch Shareholders*, 1877.

consisted entirely of main line, although the portion from Chicago to Centralia and from Dubuque to La Salle were then classed as branches. As a result the territory directly tributary was confined to the limited area within fifteen or twenty miles of the tracks. Moreover, there was no connection between the Chicago branch and the main line, resulting in great inconvenience to the company. As a remedy for the first of these evils the company, from 1855 to 1870, built up a system of semi-subsidiary branch lines. Until after 1860 the Illinois Central was the largest and strongest railroad in the central West and, therefore, was in a position to assist smaller roads. In pursuance of such a policy, the railroad, either by direct action of the directors or else through the personal efforts of individual members, helped several east and west lines. Among the most important were the Great Western (now the Wabash) from the Mississippi to Danville; the Terre Haute, Alton and St. Louis (St. Louis Division of the C. C. C. & St. L.) from Alton to Terre Haute; the Ohio and Mississippi (Baltimore and Ohio Southwestern) from Illinoistown (E. St. Louis) to Cincinnati; and the Mineral Point (Chicago, Milwaukee and St. Paul).²¹ All of these have developed into important east and west main line roads, but from 1855 to 1865 or 1866 the cost of rail transportation made it impossible for them to carry grain from Illinois eastward. Moreover, several of the companies were without eastern connections until the early sixties.

In addition to the transverse or semi-branch roads the Illinois Central lent its aid to four other companies in an effort to establish a connection between the two arms of the system. In 1852 or 1853 an arrangement was made with the Galena and Chicago Union, by which the latter should not build its line beyond Freeport, but instead should use the tracks of the "Central", while the latter should have trackage rights over the former's line from Freeport to Chicago.²² From 1854 to 1858 or 1859 this connection proved of great service to the company. But about 1857 disputes arose between the two railroads, and the Illinois Central was able to make more advantageous arrangements with the Chicago and Northwestern at Dixon and later with the Chicago and Burlington at Mendota.²³ None of these agreements allowed the "Central" any profit on the transfer of freight between the branches, while the movement of equipment

²¹*Annual Report*, Illinois Central Railroad, 1855-1870.

²²*Ibid.*

²³*Ibid.*, 1857-1860. The cars were hauled through without breaking bulk.

was handicapped. The result was a third attempt to establish a satisfactory connection. This time it assisted the Logansport, Peoria, and Burlington, later the Peoria and Oquaka, (now the Toledo, Peoria and Western branch of the Pennsylvania system) in floating its loans, took part of the company's bonds and secured trackage rights from El Paso to Gilman. The terms were favorable to the "Central" and the arrangement was made permanent by a provision that a certain percent of the gross earnings of interchange business should be invested in Peoria and Oquaka bonds.²⁴ Through trains were run from the main line to the branch and the arrangement was so satisfactory that it was continued until the company built its own line. At various times prior to 1860 the tracks of the Great Western, Terre Haute, Alton and St. Louis, and Ohio and Mississippi, were used to provide a connection between the two parts of the system, but these arrangements were merely temporary.²⁵

In addition to the agreements mentioned above, the Illinois Central had close relations with the Terre Haute, Alton and St. Louis. As soon as that line was built from Alton to Pana, a trackage agreement was made by which through trains were run from Chicago to St. Louis. In fact the Terre Haute-Illinois Central line was the first through line between those cities. Solid trains were handled, besides coaches and sleepers.²⁶ The distance by this route was not much longer than over the St. Louis, Alton and Chicago and it was regarded as an important rival of the latter, especially from 1857 to 1860.²⁷ Towards the close of the period a further connection was established between the Illinois Central and St. Louis by way of the Belleville, Southern Illinois, and Du Quoin. The latter company, a lessee of the Terre Haute company, was finished in 1869, and through connections were immediately established. Three express trains a day in each direction were run from St. Louis to Cairo, and the "Cairo Short Line" as it was termed proved profitable for both companies.²⁸

While these arrangements were of great value to the Illinois Central, it made the serious mistake of pursuing a too conservative course. Several of the roads, for example, the Mineral Point, Great Western, Peoria and Oquaka, and Chicago, Fulton

²⁴*Annual Report*, Illinois Central Railroad, 1858-1860.

²⁵*Ibid.*, 1855-1857.

²⁶*Ibid.*, 1856 ff; cf. advertisements in St. Louis newspapers.

²⁷*Ibid.*

²⁸*Railroad Gazette*, II, 252.

and Iowa (Northwestern) could have been leased or purchased on favorable terms. If this had been done it would have prevented their development into rival systems, and would also have furnished the "Central" with the necessary branches. Instead, loose traffic agreements were made and all of these lines grew into strong competitors, while the Illinois Central in 1870 had practically no branches or connecting lines.²⁹

There was one exception to this statement. Of all the railroads connected with the "Central" from 1856 to 1870 only one became a permanent part of its system.³⁰ This was the Dubuque and Sioux City Railroad of Iowa. Originally chartered as the Dubuque and Pacific, before the Civil War, it was finished during that period, being built westward from Dubuque.³¹ As soon as a short portion beyond Dubuque was finished a traffic agreement was made with the Illinois Central for mutual exchange of freight.³² Both roads developed rapidly, and by 1867 this interchange of freight was of considerable value, especially to the Illinois Central.³³ At first the "Central" was the only company connecting the Iowa company with Chicago or Milwaukee, but in 1866 and 1867 other railroads, principally lines now forming the Chicago, Milwaukee and St. Paul system, made traffic agreements with the Dubuque and Sioux City, and threatened to divert its traffic to Milwaukee.³⁴ In order to prevent the loss of such a valuable feeder, the directors of the Illinois Central leased the Iowa lines for twenty years, the first ten at thirty five per cent of the gross earnings and the next ten at thirty six per cent, with the right of perpetual lease at the latter figure.³⁵

But the Dubuque and Sioux City was building branch lines by means of two subsidiary companies, the Iowa Falls and Sioux City and the Cedar Falls and Minnesota. To obtain the parent company it was necessary to lease the branch lines on the latter's own terms. The Dubuque and Sioux City was built by persons closely connected with the Credit Mobilier and the Union Pacific, and they applied similar methods to the construction of the Iowa

²⁹*Report of the Delegates Appointed by the English and Dutch Shareholders, 1877.*

³⁰Except Belleville and Southern.

³¹*Annual Report, Dubuque and Sioux City Railroad, May 31, 1864.*

³²*Ibid.*

³³*Annual Report, Iowa State Agricultural Society, 1861 ff. American Railroad Journal, March 20, 1858.*

³⁴Dubuque newspapers, 1865-1867.

³⁵*Annual Report, Illinois Central Railroad, 1867.*

company.³⁶ A majority of the board of directors of the Dubuque corporation organized the Iowa Falls and Sioux City Railroad Company and also a construction company, with which the railroad company made a contract to build the road in return for a certain amount of stocks and bonds per mile of line. Then as directors of the Dubuque and Sioux City they leased their own road, before it was constructed, to the Dubuque and Sioux City for a minimum annual rental of \$1500 per mile, which amount just covered the interest charges on the bonds they had agreed to turn over to the construction company.³⁷ The Iowa Falls line had no equipment, was not completed and passed through a thinly settled territory from which the traffic would, necessarily, remain small for years. While there is no direct evidence to show that fraud existed, the inference from the reports of the House Committee and the minutes of the board of directors of the Dubuque and Sioux City, is to that effect.

Despite the apparent unprofitableness of the Iowa Falls and Sioux City lines the Illinois Central was forced to include them in the lease in order to obtain the profitable Dubuque and Sioux City. Since control of these lines secured a large and profitable traffic for the Illinois lines the directors of the Illinois Central were justified in making the arrangement. It was a good business proposition despite the peculiar methods pursued in leasing the Iowa Falls to the Dubuque and Sioux City.

Aside from the lease of the Dubuque and Sioux City the only important action taken by the directors of the company occurred in the celebrated Lake Front Case.³⁸ With the development of passenger traffic taking place in the sixties the Michigan Central, Chicago, Burlington and Quincy, and the Illinois Central found their Chicago station inadequate and a new building became necessary. A location on the lake front was especially fitted to the business of the three roads and, accordingly, they asked the legislature for the right to fill in certain parts of the submerged land along the lake front. The legislature was finally

³⁶Report of Credit Mobilier and Dubuque and Sioux City Railroad, *House Reports*.

³⁷Official statement by solicitor of Dubuque and Sioux City Railroad in *Annual Report*, 1887. Cites proceedings of Board of Directors. As this monograph deals with the charter lines of the Illinois Central, and as the Dubuque and Sioux City was not leased until the close of the period under discussion, the above description is regarded as sufficient.

³⁸As yet the author has not been able to find sufficient material on this subject to give a thorough treatment.

induced to grant their request, and a bill giving the three companies the right to the submerged land was passed. Governor Palmer vetoed it in a vigorous message to the General Assembly which body, however, passed it over his veto. While the main features of the bill were not bad, there were several provisions which worked a gross injustice upon the city of Chicago and gave excessive rights to the company. The common council of Chicago refused to accept the provisions of the bill, public opinion was aroused by certain parts of the measure and by the way the legislature passed it over the governor's veto, and the legislature repealed the act. The case was carried to the courts and finally decided against the company. The act was commonly known as the Lake Front Steal, and by its connection with the matter the Illinois Central incurred the ill will of the public.

The physical development of the Illinois Central railroad from 1856 to 1870 was much less important than its extensions through traffic agreements or leases. The increased traffic demanded many improvements that could not be charged to maintenance of way. As a result, large expenditures were made both from capital and from income, and the condition of the property in 1870 was much better than in 1857. However, there were no radical changes. Only a few miles of steel rails were in use and the weight of rail remained the same. The entire line, except from Kensington to Chicago, was single tracked, and bridges, culverts, roadbed, sidings, ballast, buildings, and terminals were still in accordance with the general standards adopted in 1851.³⁹

On the other hand the development of the equipment was much greater than the improvement of roadbed and buildings. Forty per cent of all the money charged to capital from 1857 to 1870 was expended on new equipment, and the amount of rolling stock was over twice as great in the latter year as in the former. There was also a marked improvement in certain kinds of equipment, especially in the passenger service. Sleepers were introduced in the first part of the seventh decade and by 1870 they were in common use on all night trains on the system. Air brakes, automatic couplers, vestibules, improved seats, heavier cars with better riding qualities, steel springs, more expensive furnishings, these were the important advances made during the period. Many of these improvements would have

³⁹*Annual Report, Illinois Central Railroad, 1855-1870; especially annual reports of Maintenance of Way Department; cf. Chap. vi.*

been classed as curiosities a generation later, but at the time they were considered of great importance and so they were. The greatest change in locomotives was the substitution of coal for wood as fuel, the use of iron or steel boiler tubes, somewhat heavier engines, and the development of distinct freight and passenger types. The general character and size of freight cars remained about the same, although a few cars capable of carrying twenty tons were in use and the old four wheel cars had been sent to the scrap heap.⁴⁰

The conditions which confronted the management of the Illinois Central from 1857 to 1870 were peculiar. Panics, crop failures, and the Civil War prevented the natural development of the system and forced it into policies not suited to its geographical location. Moreover, the officers of the company were handicapped by its foreign control and often adopted more conservative methods than would have been followed under a different system of ownership. As a result, the company could not pursue the policy adopted by some of the more aggressive of its competitors and often lost traffic as a result. Moreover, many of the successes obtained by the Illinois Central from 1857 to 1870 were merely temporary, and they inflicted loss upon the company later on.

⁴⁰*Annual Report*, Illinois Central Railroad, 1857-1870; Ringwalt, *Development of the Railway System of the United States*, various chapters; *American Railway Journal*, technical articles and advertisements, 1857-1870.

CHAPTER V.

TRAFFIC, 1857 TO 1870.

In 1851 Illinois was practically isolated from the remainder of the country. There was comparatively little trade with other portions of the nation, and intercourse even between local communities was of slight importance. Moreover, the central counties, comprising fully one-half of the arable land of the state, were thinly settled and the people living there raised only such crops as were necessary for their own immediate wants. Even along the banks of the rivers, where there was the greatest opportunity for commerce, the industrial and agricultural conditions were more backward than in Ohio or western New York.¹ The total yield of wheat, corn, and oats, according to the seventh census, was only seventy-seven million bushels, slightly over one-sixth the crop of 1879 and but little more than the amount raised in either Indiana, Ohio, or Pennsylvania. Of the amount grown less than one-tenth was shipped to markets outside the state. Fully two-thirds of such shipments were sent south by way of the Mississippi River, while less than one-third went east via the Great Lakes.² The lower Mississippi valley states, especially Louisiana, Mississippi and Alabama, were the chief domestic market for the agricultural products of Illinois. The exports to Europe from the central West were also handled by way of New Orleans. Thus, the trade of Illinois, as well as that of the other upper Mississippi valley states, was along north and south lines.

Consequently, from the traffic standpoint, the construction of the Illinois Central railroad involved peculiar problems. When Senator Douglas secured the land grant of 1850, it was given by Congress for the definite object of building a railroad from the Great Lakes and the upper Mississippi River to the Gulf of Mexico, with Chicago, Dubuque, and Mobile, the respective termini. The Illinois Central was only a part of a larger project, and a similar grant of land was given to the

¹Cf. Chap. I.

²*Ibid.*; *Report of the Committee of English and Dutch Stockholders*, 1877.

Mobile and Ohio and other southern railroads to complete the line from Cairo to the Gulf.³ This all-rail route from the north to the south was intended to supplement the Mississippi River and to provide an economical trade route which would retain the commerce of the Mississippi valley in existing channels.⁴

The importance of this north and south railroad was clearly understood by the promoters, and they built the road on the most direct line from Chicago and Dubuque to Cairo. The latter city, not Chicago, was expected to be the main terminus of the system, although not necessarily the larger city.⁵ So far as the company was concerned the location of the line meant that the only profitable route for the grain of central Illinois, especially that portion along the main line from Dixon to Vandalia, was south to Cairo. Otherwise, the road would get only a short haul to some junction point. From Cairo, it was thought, the Mississippi River, and the Mobile and Ohio, the New Orleans, Jackson and Great Northern, and the Mississippi Central railroads, with connections, would form the southern part of a through route from the Great Lakes and the upper Mississippi to Mobile and New Orleans.⁶

However, in the sixth and seventh decades of the 19th century, the old trade routes between the west and the other portions of the United States were radically altered. The development of steam navigation on the Great Lakes, the construction of a vast network of railroads, the industrial expansion of western Europe and of the north Atlantic seaboard, and the Civil

³Cf. Chap. II. Section 7 of the Act of September 20, 1850, states: "That in order to aid in the continuation of said Central Railroad from the mouth of the Ohio river to the city of Mobile, all the rights, privileges, and liabilities . . . shall be conferred on the states of Alabama and Mississippi."

⁴*Report of the Delegates Appointed by the English and Dutch Shareholders, 1877; Annual Report, Illinois Central Railroad, reports of the President and Directors, 1861-1875.*

⁵Ever since the establishment of Cairo the capitalists interested in the promotion of the city have had extremely sanguine ideas as to the future importance of the place. When the Illinois Central was incorporated Chicago had a population of only thirty thousand, and frequent prophecies were made that Cairo would soon be the metropolis of the state. Sober statements were made that the city would have a population of half a million before the end of the century.

⁶Reports of Robert Rantoul and David Neal in *Documents Relating to the Organization of the Illinois Central Railroad; Annual Report, Illinois Central Railroad, 1861-1874.*

War, with the resulting prostration of the South, resulted in a readjustment of the commerce between different sections of the country. Trade was forced out of the paths it had followed prior to the war and was established on new lines. The commerce of the North and South was almost destroyed and trade was carried on along lines of latitude, not longitude.⁷

The most important influence which brought about this change was the industrial expansion of the north Atlantic states. By 1850 this portion of the country had become largely industrial in character, while agriculture was relatively of much less importance than a generation previous. Then, from 1850 on, the rapid settlement of the west, the prosperity of the southern states, abundance of capital, and various tariff measures, culminating in the highly protective Morrill act of 1861, combined to stimulate this movement. As early as the close of the fifth decade these states had reached practically their limit of agricultural production; in other words, the food supplies necessary for their rapidly growing population could no longer be furnished by the farms east of the Alleghany mountains. This condition was made more prominent by the large immigration of the period and the higher standard of living which meant larger per capita consumption of all articles. Thus, there was an enormous demand for food stuffs over and above that supplied by the agricultural population of those states, and even in 1870 considerably over one-third of the total grain used was purchased from the west.⁸

⁷The influence of the Civil War in changing the routes by which western produce was sent to market can hardly be overestimated. As stated in the text, the commerce of the upper Mississippi valley was almost entirely with the southern states. In the publications of the time, it is taken for granted that the Mississippi river is the natural outlet of this region. At the present time we are so accustomed to having western produce sent east by way of the Great Lakes that the southern route is the unnatural one. Looking at the matter purely from the standpoint of natural advantages the southern route is by all odds the most advantageous one. As shown by the correspondence between Breese and Douglas, it was clearly the purpose of Breese and Douglas to make the Illinois Central a north and south line which would develop New Orleans or Mobile in preference to New York.

⁸*Transportation Routes to the Seaboard*, p. 14; Bogart, *Economic History of the United States*, Chaps. XI, XII.

CONSUMPTION OF WESTERN GRAIN IN NORTH ATLANTIC STATES: 1872.	
Shipments of western grain to New England states.....	41,132,225 bus.
Shipments of western grain to Atlantic states.....	63,744,897 "
TOTAL	104,877,122 "

A similarly increasing demand occurred in Great Britain, Holland, and other countries of western Europe. English and continental industries grew very rapidly during the middle of the 19th century and this movement was necessarily accompanied by a steady growth in population. In 1846 the Corn Laws of England were repealed,⁹ and the industrial population was free to purchase wheat and corn from abroad. The bulk of this supply came from the United States, and the export of grain (including flour and meal) rose from thirteen million bushels in 1850 to over fifty million in 1870.¹⁰

The third market for Illinois products was the southern Mississippi valley. The cotton states, such as Mississippi, Alabama, Louisiana and Georgia, although well adapted to the raising of corn and oats, found it more profitable to devote their energies to the production of cotton and sugar, and to purchase many of their food supplies from the west. The high price of cotton prior to the Rebellion made it especially profitable to pursue this policy, and in the three or four years immediately preceding the war the demands for western corn and pork were especially heavy. However, the Civil War destroyed this market and diverted the grain traffic to the eastern seaboard. After 1865 attempts were made to revive this trade, but the enormous losses of the southern planters, the emancipation of the slaves, the lack of capital, the falling price of cotton, and the destruc-

⁹In 1841 the population of the United Kingdom was 26,730,000; in 1871 this was 31,484,000, or an increase of 4,754,000 million in the thirty years. During the same time the agricultural population actually decreased. Gibbins, *Industry in England*, p. 446; Levi, *History of British Commerce*, p. 297; Seignobos, *Political History of Europe since 1814*, p. 59.

¹⁰Levi, *History of British Commerce*, p. 297; cf. Tenth Census (1880), volume on Agriculture, monograph on Cereal Production in the United States, especially p. 468.

In 1870 the United Kingdom consumed 14,100,000 quarters of wheat grown on English farms, and imported 7,950,000 quarters, or 63,600,000 bushels. The exports of the United States in 1870 were: wheat, 36,584,000 bushels; flour, 3,463,000 barrels; corn, 1,392,000 bushels; corn meal, 187,000 barrels. This was the greatest amount exported since 1863. From 1850 to 1870 the continental demand for American grain or grain products was slight. During occasional years the exports were sufficient to attract attention, but usually they were not. Until the Civil War the West Indies were an important market for grain, especially grain sent south by way of the Mississippi River. The competitors of the United States for the English market were France, Russia, and Turkey.

tion or diversion of the transportation facilities made it difficult to develop the old commerce, while the changed economic conditions forced the planters to raise more of their food supplies than before. Therefore, in 1870, the southern market for Illinois and Iowa grain was almost negligible.¹¹ Moreover, the same influences which affected the domestic market ruined the exportation of western products via New Orleans. Prior to 1850 the southern port was as important a grain center as New York, but various causes, some of them originating before the war, reduced the amount of grain exported to an insignificant figure, and in the fifteen years from 1856 to 1870 the total shipments of corn, flour, and wheat from New Orleans were less than fifteen million bushels, as against three hundred million bushels from New York City.

The industrial development of the country and the growth of a non-agricultural population were not confined to the eastern states. The northwestern and upper Mississippi valley states grew very rapidly in population from 1850 to 1870, and this growth was especially noticeable in the towns and cities. Cleveland, Indianapolis, Toledo, Chicago, Milwaukee, Detroit, and St. Louis became large cities, while the general urban population grew much faster than the agricultural population. This large increase of an element which did not produce its own food supplies made necessary a correspondingly larger production of grain and meat by the agricultural districts.

Thus, the combined demands of Europe, of the north Atlantic states, and of the urban population of the central west necessitated a large increase in the grain production of the country.¹² This demand could be met in only two ways: either a highly intensive system of cultivation must be adopted in such states as New York, Pennsylvania, Ohio, and Indiana, or else the uncultivated prairies of Michigan, Illinois, Wisconsin, Missouri, and Iowa would have to be utilized. To depend upon highly intensive farming was uneconomical at that time and the natural alternative was the utilization of the western lands. Of this

¹¹Olmsted, *The Lower South, A Journey Through the Back Country*; Helper, *The Impending Crisis*, especially Chap. I, pp. 9, 10; *Annual Report*, Illinois Central Railroad, 1857-1861; Eighth Census (1860), volume on Agriculture, Introduction; *Report of the Delegates Appointed by the English and Dutch Shareholders, 1877*; Bogart, *Economic History of the United States*, Chap. xx, p. 273.

¹²The following table shows the concentration of grain production in

territory the most available part, as well as the richest in potential agricultural resources, was the corn belt of Illinois and Iowa, particularly the region traversed by the charter lines of the Illinois Central Railroad. Because of these advantages, this section, during the period from 1850 to 1870, developed into the most important single source of grain production in the United States and the center of supply for both the eastern states and for Europe.¹³

However, as explained in Chapter I, it was this very part of Illinois, possessing as it did the greatest opportunities for exploitation, that was the largest area unprovided with adequate transportation. Accordingly, in 1850 there was a pressing need on the part of the grain consuming territory in the east and south, as well as on the part of the grain growing territory of central Illinois, for a system of transportation that would open up to development these slightly touched resources. The means for the accomplishment of this result was an adequate system of transportation, both local and external, for the interior of the state the construction of railroads such as the Illinois Central; for the country as a whole, the improvement of the existing natural waterways and the construction of new railroads, or

the central western states. The statistics in the table are obtained from the United States Census, volumes on Agriculture.

INCREASE IN PRODUCTION OF CORN, WHEAT, AND OATS, 1850-1870.

	1850	1870	INCREASE	PER CENT
Group I.....	151,408,000	190,097,000	38,689,000	25.6
Group II.....	151,870,000	208,161,000	56,291,000	35.4
Group III.....	156,450,000	521,255,000	364,805,000	232.7
Group IV.....	47,000	57,799,000	57,752,000	
Group V.....	376,069,000	304,762,000	61,307,000	16.3
United States.....	624,600,000	1,408,044,000	784,044,000	125.4
Group I	Connecticut, Delaware, Massachusetts, New Jersey, New York, Rhode Island, Maine, New Hampshire, Vermont.			
Group II	Ohio, Indiana.			
Group III	Illinois, Iowa, Michigan, Missouri, Wisconsin.			
Group IV	Kansas, Minnesota.			
Group V	Alabama, Arkansas, Georgia, Kentucky, Louisiana, Mississippi, Tennessee.			

¹³Cf. tables I to V. The 20 counties directly tributary to the I. C. R. R. produced in 1870 four per cent of all the grain produced in the country and nearly eleven per cent of that produced in Illinois, Iowa, Michigan, Missouri, and Wisconsin. The proportion of corn and oats was considerably larger.

extension of old ones, from Illinois to the Gulf of Mexico and to the Atlantic seaboard.

From an examination of the map one perceives that Illinois is located between the two great natural highways of North America—the Great Lakes—St. Lawrence River (Erie Canal after 1825) route to the north and east, and the Mississippi River route to the south. Because of these natural connections there was a small movement of grain outward from Illinois prior to 1850, but, in the absence of railroads connecting the interior counties with either of these two routes, the amount shipped did not satisfy the growing needs of the country. Moreover, the efficiency of water transportation, as then existing, was not such as to permit an economical movement of grain, even when brought to the terminals of the waterways. Accordingly, the development of central Illinois was dependent, in the first place, upon the construction of the Illinois Central Railroad, or another railroad answering the same purpose; and, in the second place, upon the improvement of the waterways and railroads mentioned in the previous paragraph. Moreover, as is likewise evident from an examination of the map, Illinois is a watershed for both of these great waterways, so that, by only a short land haul, traffic can be diverted to one or the other of these routes. Consequently, the state can supply either or both of the great domestic markets for food stuffs: the lower south by way of the Mississippi River, and the eastern states by way of the Great Lakes. Furthermore, in these two routes and the ports of New Orleans and New York, it possesses alternative trade routes to the main European markets.¹⁴

¹⁴From the standpoint of geology, geography, history, politics, and industry Illinois is the connecting link between the eastern, the southern, the northern, and the western parts of North America east of the Rocky Mountains. By geological formation and geographical location central Illinois, as noted in the text, forms a plain tributary to both Lake Michigan and the Mississippi River. Southern Illinois was settled mainly from the southern slave states, while northern Illinois was settled by immigrants from northern Europe, New England, and New York. Politically, the state has had active and, at times, a leading place in the affairs of the parties: Whig, Democrat, Republican, Populist, Progressive, and Socialist. In industry it is not only the most important agricultural state, but, as is seen in the great industrial developments around Chicago, E. St. Louis, and in southern Illinois, it is the natural center of industrial production for the central west. (St. Louis, Gary, etc., although just outside the borders of the state are, in reality, an integral part of the greater com-

This naturally advantageous position of Illinois was improved and strengthened by the construction of the Illinois Central Railroad during the years 1851 to 1857, as told in detail in Chapters III and IV. The main line and the Dubuque branch extended in the form of a great bow from the upper waters of the Mississippi, at Dubuque, to its junction with the Ohio River, at Cairo. The Chicago branch extended from Lake Michigan, at Chicago, directly south to Centralia on the main line and from there to Cairo, thus connecting the Great Lakes and the Mississippi River at its junction with the Ohio River. Moreover, by the leases, trackage agreements, and traffic alliances mentioned in Chapter IV, the company gradually established connections from the Great Lakes, at Chicago, directly west across the state to the upper Mississippi River, at Dubuque, and the Missouri River, at Sioux City; from the Great Lakes, southwest across the state, to the Mississippi River, at St. Louis, just below its junction with the Missouri River; and between the two main terminals of the central Mississippi, i.e. Cairo and St. Louis.¹⁵ This strategic location of the railroad gave it two important advantages that have proven of vital importance in later years: first, the Illinois Central system constituted the best, and at first the only means by which the farmers of the greater part of Illinois could reach Chicago and St. Louis, the two main grain and live stock markets of the West; second, the fact that the system was tributary to both of the main natural highways of the continent permitted the railroad, acting as agent for its territory, to route traffic either to the south or to the east as proved more advantageous, or to Europe via either of the two gateways.

Of no less importance than the actual construction of the monwealth.) These facts, though only slightly understood at the time, played an important part in the early history of the Illinois Central and have influenced in a dominant way its traffic development.

¹⁵Cf. Chap. iv; viz. (1) Chicago—(a) Galena & Chicago Union R. R., or (b) Chicago, Burlington & Quincy R. R., or (c) Peoria & Oquaka R. R. to main line of I. C. R. R. at Freeport, Mendota, and El Paso, respectively; I. C. R. R. to Dubuque; Dubuque & Sioux City R. R. (western lines) to Sioux City. (2) Chicago—Chicago Branch to (a) Sandoval: Mississippi & Ohio R. R. (now B. & O. S. W.) to St. Louis, or (b) Pana: St. Louis, Alton & Terre Haute R. R. (now C. C. C. & St. L. R. R.) to St. Louis. (3) Cairo—main line to Odin; M. & O. R. R. to St. Louis, or, about 1868, main line to Du Quoin; St. L. A. & T. H. R. R. (now Cairo Short Line stem of I. C. R. R.) to St. Louis.

railroad was the cost of transportation, both from the farm to Chicago, Cairo, or St. Louis, and from these terminals to the ultimate destination in the South, the East, or Europe. If the company and the territory tributary to it were to prosper it was necessary, not only that the rates from the farm to the final market be less than before the construction of the railroad, but also that they be low enough to allow Illinois grain to travel eastward or southward in competition with grain from such states as New York, Pennsylvania, Ohio, Indiana, Kentucky, or Tennessee, which were much nearer the consumer. Thus, the traffic development of the Illinois Central Railroad and of its territory was determined by two factors, both of them largely beyond the control of the management: first and essential, such an improvement in the efficiency of railroad and water transportation that the cost of carrying grain from the farm to the final market, plus the cost of raising the grain in Illinois, would be less than the cost of producing and shipping it from the farms which supplied the demand in 1850; second, and incidental, such an improvement in transportation having been effected, the determination of the question whether the best market would be the existing one in the South or the newly developing one in the East. In short, therefore, the traffic history of the Illinois Central Railroad from 1857 to 1870, as discussed in the following pages, is the story of the adaptation of the railroad to the absolute and relative developments of the east and west trade route via Chicago and of the north and south route via Cairo.

Of these two routes, the one from Chicago east gained the most from improvements in transportation facilities taking place between 1850 and 1870. The water route, via the Great Lakes, the Erie Canal, and the Hudson River, had provided reasonably cheap rates for through traffic ever since 1825, but in the decades before and after the Civil War, improvements were made which reduced the charges to a basis much lower than what existed in the thirties and forties. Larger and faster lake vessels were put in service, steam generally supplanted sails, and various economies of operation were made, the result of which greatly decreased the actual cost of making a trip from Chicago to Buffalo.¹⁶ In 1862 the deepening of the Erie Canal was finished and it became possible for canal boats of 250 tons to go from

¹⁶Ringwalt, *Development of Transportation Systems in the United States*, p. 135; Tenth Census (1880), volume on Agriculture, monograph on Cereal Production.

Buffalo to New York City, thus reducing the cost of carriage per ton.¹⁷ At the same time, the important harbors on the Great Lakes were dredged and the canals at Detroit, Sault Ste. Marie, and Niagara Falls were enlarged to accommodate large lake vessels.¹⁸ Moreover, the reduced cost of carriage was accompanied by even more important improvements in the handling of freight at Chicago, Buffalo, and other terminals, especially through the erection of elevators, the introduction of steam shovels, power conveyors and other labor saving machinery, and the better arrangement of the docks.¹⁹ The natural result of these various devices to cheapen cost of transportation was a large expansion of the lake and canal trade, which, in turn, permitted further economies and allowed still more extensive reductions in rates.

Quite as important as the improvement of water transportation was the development of all-rail connections between Chicago and New York, Boston, Philadelphia, and Baltimore. In 1853 the Lake Shore and Michigan Southern was finished from Buffalo to Chicago; in 1854 Cornelius Vanderbilt consolidated several disjointed lines into the New York Central and Hudson River Railroad; in 1855 the Erie was built to Buffalo; in 1856 the Baltimore and Ohio, and Ohio and Mississippi route was completed; and in 1857 the Pennsylvania Central, and Pittsburg, Fort Wayne, and Chicago line was extended to Chicago. Other railroads were completed from Buffalo to the seaboard, so that in 1870 there were a number of strong, competitive lines from Lake Michigan to the Atlantic.

At first the all-rail lines were unable to compete with the water route for the low grade freight, but between 1860 and 1870 further consolidations among the railroads, and extensive reductions in cost of operation enabled the New York Central and Pennsylvania to obtain a large share of the east and west traffic. Fierce competition between the two rival lines caused temporary reductions in rates, but more permanent influences, such as consolidation of competing and connecting lines, reduction of curves and grades, technical improvements in motor power, equipment, and roadbed, better methods of organization, accounting and operation, largely increased traffic, and the adop-

¹⁷Ringwalt, *Development of Transportation Systems in the United States*, p. 135; Tenth Census (1880), volume on Agriculture, monograph on Cereal Production.

¹⁸*Ibid.*

¹⁹*Ibid.*

tion of fast freight lines, enabled the railroads to carry most of the flour and much of the wheat and other grain in competition with the lake and canal boats.²⁰

The extensive improvements in both rail and water transportation during the sixth and seventh decades of the 19th century had a direct influence on rates. Not only were there radical reductions of a temporary nature, caused by rate wars and tariff controversies, but reductions in cost of operation allowed permanent decreases hardly less important. As most of the grain traffic from 1850 to 1868 or 1869 was handled by the lake vessels the changes in lake rates were of primary importance. In the twelve years from 1858 to 1870 the average lake rates from Chicago to Buffalo decreased as follows:^{20a}

	CORN	WHEAT
1858	12.7c per bu.	15.50c per bu.
1870	6.0 " "	6.77 " "
DECREASE	6.7 " "	8.73 " "

This reduction in lake rates was accompanied by similar reductions in freight charges on the Erie Canal and in 1870 the average rate per ton on down freight was \$3.06 as against \$4.81 in 1854, or a reduction from 14.4c per bushel to 9.2c.²¹ The through rate on wheat from Chicago to New York City, including all tolls, declined from 28.36c per bushel in 1864 to 20.24c in 1871 (11.11c in 1870), with rates on corn from 1c to 3c lower per bushel.²² As the price of corn, oats and wheat were over fifty per cent higher in 1870 than in 1855, the decline in nominal rates meant a much greater decline in absolute charges. Thus, in 1858 one bushel of wheat at Chicago paid for the transportation of two bushels to New York, while in 1871 it provided for the carriage of 6.1 bushels.²³

Although at first unimportant, all-rail shipments of grain from the west to the east had become common by 1860 and by 1870 were fully as frequent as all-water shipments. The economies mentioned above permitted even more radical reductions in rates by railroads than took place on the lake. In 1850 the

²⁰Johnson, *American Railway Transportation*, pp. 25-27; Ringwalt, *Transportation Systems in the United States*, pp. 140-209.

^{20a}*Annual Report*, Chicago Board of Trade, 1905, p. 108.

²¹*Transportation Routes to the Seaboard*, in Sen. Rep., 43 Cong., 1 sess., Appendix, p. 168.

²²*Annual Report*, Chicago Board of Trade, 1905, p. 108.

²³Aldrich Report, II, pp. 7, 8, 60, 61.

usual charge for grain traffic was 4c per ton per mile, or occasionally 3c, irrespective of distance.²⁴ By 1870 the New York Central had reduced the general average rate per ton per mile to 1.9 cents, as against 2.5c in the earlier year, 1856. On the Erie there was a further reduction from 2.5c in the earlier period to 1.4c in the later.²⁵ Moreover, during the summer months wheat was carried by rail from Chicago to New York for 27c a bushel, or 93c per ton per mile.²⁶ At times, on account of rate wars, the tariff charges were reduced to an even lower figure per ton per mile. However, the average rates for all-rail shipments from Lake Michigan to the Atlantic seaboard declined from 36.19c per bushel in 1858 to 28c in 1870 for corn, and from 38.61c to 30c for wheat.²⁷ Moreover, the railroads from Buffalo to New York, especially the New York Central and Erie, made special efforts to handle grain between these points in competition with the Erie Canal. As a result the average rail rate in 1871 was 18.3c for wheat and 17.0c for corn, as against 13.1c and 11.3c respectively on the canal. The average lake and rail rate, i.e. via lake to Buffalo and from there to New York by rail, was 22.2c per bushel on corn and 22.5c on wheat.²⁸

Conditions existing in the east and west traffic did not hold good for shipments from Chicago south. The actual cost of handling freight from Cairo or St. Louis to New Orleans had not materially decreased from 1850 to 1870, and, as a result, rates between those points declined much more slowly than the rates on east and west lines of transportation, so that in the latter year charges from central Illinois to the Gulf were only slightly less than the lake and canal tariffs to New York. The barge rates from St. Louis were exceedingly low, but the general introduction of this system of carriage did not take place much before 1870 and, consequently, exerted only a slight influence on rates from 1850 to 1870.²⁹ The steamboat charges were nearly twice those made by the barge lines, but quicker time and less danger to the freight compensated the shipper for the difference.³⁰ Considering merely the tariff rates, there was a

²⁴*Transportation Routes to the Seaboard*, p. 61.

²⁵*Ibid.*, p. 61.

²⁶*Ibid.*, p. 52.

²⁷*Annual Report*, Chicago Board of Trade, 1905, p. 108.

²⁸*Ibid.*

²⁹*Transportation Routes to the Seaboard*, I, 24, 52; *ibid.*, Appendix, pp. 19, 20, 53, 96, 167, 168; *ibid.*, II, 897-900.

³⁰*Ibid.*

difference of about $\frac{1}{2}$ c per hundred on fourth class shipments and from 10c to 12c per bushel on grain from central Illinois to market in favor of New Orleans.³¹ However, service and other conditions reversed this advantage. (1) The lowest north and south rates were for shipment in bulk by barges and this service was not in general use before 1866. Moreover, most of the lines stopped at St. Louis, not Cairo, and the Illinois Central received no advantage in sending grain to St. Louis in preference to Chicago, as the rates from central Illinois to the two cities were practically the same. (2) Shipments of grain by steamboat from Cairo south had to be sacked and the cost of sacking averaged several cents per bushel. (3) On account of the longer route and the semi-tropical climate, loss from shrinkage via the north and south route was much greater than via the east and west one. This loss would run from ten to twenty per cent of the weight of corn shipments. (4) Terminal, storage, and transfer facilities were much poorer at New Orleans than at New York. (5) The local southern demand for grain was small, and Kentucky, Tennessee and Missouri were in a better position than Illinois to compete for the traffic.

Moreover, through export traffic was practically prevented by the higher steamer rates from New Orleans to Liverpool than from New York to Liverpool. In 1870 there were no quotations for the transportation of corn via steamer from New Orleans to Liverpool and in only five months were there any quotations for shipment by sailing vessels. In 1872, the only year for which there is a good basis for comparison, the difference was as follows:—(quotations in pence per bushel, corn)

	STEAM	SAIL
New York to Liverpool.....	7 $\frac{1}{2}$ d	6 $\frac{1}{2}$ ¹ / ₁₂ d
New Orleans to Liverpool.....	11 $\frac{1}{4}$ d	10 $\frac{3}{4}$ d
Difference in favor of New York	4d(8c)	4d(8c) ³²

This difference of nearly eight cents per bushel in favor of New York offset most of the advantages received by New Orleans from lower domestic rates. Higher insurance, higher elevator and wharfage charges, longer time en route, with increased interest on the shipment, eliminated the remaining advantages New Orleans possessed over New York and placed the two ports

³¹*Transportation Routes to the Seaboard*, I, 24, 52; *ibid.*, Appendix, pp. 19, 20, 53, 96, 167, 168; *ibid.*, II, 897-900.

³²*Ibid.*, Appendix, pp. 20, 54. It should be noted that the comparison of rates is based on a single year and is liable to error, but it was the best that could be secured.

on an equality so far as transportation charges were concerned. But even had equal rates existed the disadvantages of the southern route were too great to permit any important export of grain by way of New Orleans or Mobile.³³

The second important item affecting the movement of grain from Illinois to the East was the local transportation charge, that is, the rate from the local station to Chicago or Cairo. In Chapter I it was shown that the cost of handling grain over Illinois roads was so high that territory more than ten to fifteen miles from railroad or river transportation could not send its produce to outside markets, and that the Illinois Central Railroad was necessary to remedy this trouble. On the macadamized turnpikes of the eastern states the cost of carrying grain by wagon was about ten cents per ton per mile, but over the Illinois roads this cost must have been increased fifty to one hundred per cent.³⁴ With the completion of the railroad this charge was reduced materially. Moreover, there was a slight reduction in rates from 1856 to 1870, primarily in bulky articles such as grain, lumber, coal, and salt. The higher class goods had practically the same rates in 1870 as in 1856, although some difference must be made for inflation of the currency. As early as 1856 a rate of 1.75c per ton per mile was made on coal³⁵ and in the next fourteen years this charge was reduced to less than 1c.³⁶ Grain from local stations was carried to Cairo in 1858 for 2.2c per ton per mile and for about 1.5c in 1870. On through grain shipments to New Orleans the Illinois Central received a rate of 1.3c per ton per mile in 1870.³⁷ A somewhat

³³*Transportation Routes to the Seaboard*, Appendix, pp. 20, 54. Prior to 1861 a few stretches of railroad were constructed parallel to the Mississippi River, (mainly, what is now the Mobile & Ohio R. R., built under the Land Grant Act of 1850, the Mississippi Central R. R. and the New Orleans, Jackson & Great Northern R. R., now the southern lines of the I. C. R. R.) and, though incomplete, they were just beginning to form a southern connection for the Illinois Central Railroad when the Civil War paralyzed all communication with the South. Following the war efforts were made to rehabilitate and complete these southern lines, but with little success until after 1870. Accordingly, during the period covered in this monograph, railroad communication between Illinois and the Gulf of Mexico was almost non existent.

³⁴Ringwalt, *Transportation Systems in the United States*.

³⁵J. W. Foster, *Mineral Resources of the Illinois Central Railroad*, p. 10.

³⁶*Annual Report*, Illinois Central Railroad, 1870.

³⁷*Cairo Times*, February 17, 1858; cf. pp. 115-117; also, *Transportation Routes to the Seaboard*, II, 897-900.

better basis of comparison is the average rate on different classes of traffic. The per ton per mile rates on local and through traffic in 1859 and 1870 were as follows:—

	1859	1870	
Local freight north.....	2.19c	2.44c	per ton per mile.
Local freight south.....	2.06	2.35	" " " "
Through " north.....	1.70	1.12	" " " "
" " south.....	1.86	1.55	" " " "
" " n. & s.....	1.80	1.36	" " " "
All " n. & s.....	2.14	2.31	" " " " ³⁸

Nearly all of the local traffic moving south consisted of lumber, coal, and a little grain; three-fourths of the local traffic north was grain, so that the rates on north and south local traffic give an approximate idea of the rates charged for lumber, coal, and grain. However, the true standard by which local rates must be judged, is whether they permitted grain from central Illinois to be carried east or south, in competition with grain from other parts of the state, and from Missouri, Wisconsin, Michigan, and Indiana. Up to about 1868 the farmer along the Illinois Central competed on favorable terms with the farmers of the states farther east and south, but this was due to the high price of wheat and corn and the richness of the soil, rather than to favorable railway rates.³⁹

Reduced local and through rates on agricultural products made it possible for farmers to take up the millions of acres of vacant land in the northwestern and upper Mississippi valley states and produce grain for eastern and European markets. As a result, the two decades from 1850 to 1870 witnessed an unprecedented immigration into Illinois, Michigan, Wisconsin, Missouri, Minnesota, and Kansas, and by 1870 the population of this territory was nearly four times what it was in 1850.⁴⁰ This is shown in the following table:

I. SETTLEMENT OF THE CENTRAL WEST.				
GROUP	1850	1870	INCREASE	PER CENT
Illinois & Iowa.....	1,043,000	3,733,000	2,710,000	259
Mich., Wis. & Mo.....	1,384,000	3,959,000	2,575,000	186
Minn. & Kansas.....	6,000	803,000		
TOTAL	2,433,000	8,496,000	6,063,000	249

³⁸*Annual Report*, Illinois Central Railroad, 1859, 1870. Cf. Chap. vi.

³⁹Eighth Census (1860), volume on Agriculture, Introduction; cf. Martin, *The Granger Agitation*.

⁴⁰Seventh and Ninth Censuses (1850, 1870).

The immigrants may be divided into groups according to the relation to the Illinois Central of the territory settled by them: (1) those settling in Illinois and Iowa tributary to the railroad; (2) those taking up land in parts of Illinois and Iowa in direct competition with the Illinois Central territory in Wisconsin, Michigan and Missouri; (3) Those going to Minnesota and Kansas, where they did not compete actively with central Illinois until about 1870. The two latter groups are outside the field of this history, but it may be said that their growth was much slower than that of Illinois and Iowa directly tributary to the Illinois Central and subsidiary lines.

While this immigration went into every portion of the state, the central counties along the Illinois Central Railroad, and especially those between La Salle and Shelby counties, were the least settled in 1850 and, consequently, offered the greatest opportunity to farmers. In the twenty years from 1850 to 1870 out of a total increase of population of 1,688,000, 981,292 occurred in the belt of counties near the "Central", and in the latter year slightly over one half of the inhabitants of the state lived in the forty four counties tributary to this railroad.⁴¹ In 1850 the central counties were thinly settled, and what is now called the "corn belt" was almost entirely unoccupied government land, but by 1870 this portion of Illinois had been transformed into

II.

SETTLEMENT OF THE FORTY FOUR COUNTIES IN ILLINOIS TRIBUTARY TO THE ILLINOIS CENTRAL RAILROAD.

	1850	PER CENT	1860	PER CENT	1870	PER CENT
Group I.....	115,113	12.4	291,829	17.0	495,253	19.5
Group II.....	248,868	30.2	585,548	34.3	923,579	36.6
Cook Co.....	43,385	4.2	144,954	8.4	349,966	13.8
TOTAL	292,253	34.4	730,502	42.7	1,273,545	50.4
State	851,000	100.0	1,711,000	100.0	2,539,000	100.0

Group I consists of the following agricultural counties in the central part of the state:—Bureau, Champaign, Coles, De Witt, Douglas, Ford, Iriquois, Cumberland, Kankakee, La Salle, Livingstone, Logan, McLean, Macon, Marshall, Moultrie, Putnam, Shelby, Woodford, Piatt.

Group II consists of the above counties and Alexander, Bond, Clay, Clinton, Effingham, Franklin, Fayette, Jackson, Johnson, Jefferson, Jo Daviess, Lee, Marion, Montgomery, Ogle, Perry, Pulaski, Stephenson, Union, Will, Williamson, Washington. All of these counties are within fifteen miles of the Illinois Central Railroad and are tributary to it.

⁴¹Seventh and Ninth Censuses (1850, 1870).

a well settled farming community. With the growth of population the area not under cultivation steadily declined, and by 1870 practically all the land surface of the state, especially in the central part, was either under crop or else used for meadow or woodland.⁴² Early in the sixth decade the federal land was sold and the railroad grant, with the exception of less than three hundred thousand acres, was disposed of by 1870.⁴³

The rapid settlement of Illinois and Iowa was accompanied, it might almost be said, was caused by important improvements in agriculture. Improved plows and harrows, seeders, cultivators, binders, reapers, threshers, corn shellers and other implements were introduced and it became possible for one farmer with the aid of farm machinery to raise several times as much grain as under the old hand method, and, that too, with much less physical exertion. Naturally, this decreased the cost of raising a crop and prevented any considerable increase in the price of food stuffs. Accordingly, it was possible for the farmers tributary to the Illinois Central Railroad, despite the large enlistment in the federal armies during the Civil War and the growth of the industries of the state, to increase their production of food stuffs sufficiently to meet the enormously increased demand of the eastern states during the decade from 1861 to 1870, and at a cost of production low enough to permit good profits to themselves and high rates to the railroad.⁴⁴

Coincident with the development in the sources of demand and supply outlined so far, viz., increased eastern and European consumption of grain, and improved rail and water connections, on the one hand, and settlement of the interior counties of Illinois, together with improved farming practice, on the other hand, came the development of the traffic organization of the Illinois Central Railroad as the connecting link between the two. The railroad was built to connect these sources of demand and supply in food stuffs and, until long after 1870, it was primarily a carrier of agricultural products. Therefore the prosperity of the company was dependent upon the ability of the adjacent territory to raise and ship large quantities of grain and of live stock.

⁴²Seventh and Ninth Censuses (1850, 1870).

⁴³*Annual Report*, Illinois Central Railroad, 1870.

⁴⁴Bogart, *Economic History of the United States*, pp. 228-303; Quintance, *The Influence of Farm Machinery on Crop Production and Labor*; Fite, *The Agricultural Development of the West during the Civil War*, *Quar. Jour. Econ.*, XX, 259-278. Cf. *Transactions of Illinois State Agricultural Society* during this period.

Prior to 1870 the Illinois Central Railroad was the vital factor in developing central and southern Illinois, and this influence commenced as soon the first piece of track was laid in May, 1852. Of course, the amount of traffic handled during the construction of the road was small and consisted largely of local freight, principally immigrant's goods, but even in this way it was of great assistance in settling the interior counties. At first, work trains, and then regular freight and passenger trains were operated on sections of track as soon as completed, and in this way it became much easier for settlers to reach either the government or railroad lands which were on the market. However, the real traffic history of the company does not commence until 1855, at which time all the railroad, with the exception of seventy-seven miles from Mattoon to Centralia, was in use.⁴⁵

From 1857 to 1870 all of the charter lines, together with such connections as were added from time to time, were open for traffic. As stated in Chapter IV, a regular freight and passenger service was established, tariffs were promulgated, connections were secured, aid was extended to farmers along the line; in a word, everything was done to build up the traffic of the road, especially that of grain and live stock. That the railroad, next to the federal government, was the largest single land owner in the country naturally stimulated its interest in agricultural production, even beyond that of the other granger railroads.

Moreover, the traffic policy of the Illinois Central Railroad was greatly influenced by the fact that it was tributary to the Great Lakes as well as to the Mississippi River. The Civil War and other causes beyond the control of the management almost destroyed the historical southern market of Illinois and had the railroad been constructed as originally planned its traffic would have been insignificant. Having been built tributary to Chicago as well as to Cairo it was, however, in a position to divert business northward when its natural connections with the South were prostrate and Chicago became its main terminal. For that reason prices and facilities there were the determining factor

⁴⁵*Annual Report*, Illinois Central Railroad, 1855-1857. The net earnings to January 1, 1855, amounted to \$276,540.59. Estimates of the gross earnings are given, but they are so incorrect, it is not worth while to repeat them. However, the approximate gross earnings are supposed to have been about three quarters of a million dollars in the period prior to the first annual report in 1855.

in the growth of the railroad and of that part of Illinois and, later, of Iowa dependent upon it.⁴⁶

As Illinois was primarily an agricultural state the movement of its crops, especially corn and wheat, depended upon demands outside the state, in other words upon the needs of the industrial population of the East and South. But whether the farmer in McLean or Macon county would ship his grain at all—the vital problem for the railroad—was decided by the price of grain at Chicago. Unless the New York price, less the cost of transportation, in other words the Chicago price, would yield a profit on a bushel of corn or wheat, the farmer would not ship it, at least he would not produce and ship it for any length of time. Fortunately for the Illinois Central, the price of all farm products was high from 1861 to 1870, and was excessively low in only one or two years before that period. These high prices were accompanied by large demands from other parts of the country, as mentioned above, especially in the period from 1861 to 1870, and, at times, the supply of grain was insufficient to meet all the necessary demands of the north Atlantic states and Europe. On account of the inflation of the currency the increase in currency prices was very great, but there was a fair advance in gold prices, while the expenses of the farmer for labor and supplies did not increase as rapidly as the receipts from his grain or cattle.⁴⁷ Of the different grains corn had the greatest rise in price⁴⁸ and wheat the least,⁴⁹ but as the territory dependent on the Illinois Central was largely corn country this proved of advantage to both the farmer and the railroad. There was also a large increase in the price of cattle; again favoring the central counties of the state.⁵⁰

The general adoption of labor saving machinery, combined with high Chicago prices for grain and a large demand for food stuffs, had a very strong influence on the production of grain in the territory along the Illinois Central Railroad. Vacant gov-

⁴⁶The rise of Chicago as the leading grain and live stock market of the world was coincident with the developments in the traffic of the Illinois Central Railroad mentioned in the text and was of great importance to its territory in affording a convenient market for grain and live stock.

⁴⁷Fite, *The Agricultural Development of the West During the Civil War*, *Quar. Jour. Econ.*, XX, 259-278. Cf. Mitchell, *History of the Greenbacks*.

⁴⁸Aldrich Report, II, pp. 7, 8.

⁴⁹*Ibid.*, pp. 60, 61.

⁵⁰*Ibid.*, p. 26.

ernment and railroad land was occupied and the acreage under cultivation increased rapidly from census period to census period. The growth in some of the interior counties was remarkable. Champaign county increased its area under cultivation from twenty two thousand acres in 1850 to four hundred and nineteen thousand in 1870; Livingstone from thirteen thousand to three hundred and seventy seven thousand, and Iroquois from thirty thousand to three hundred and twenty two thousand.⁵¹ The twenty one typically agricultural counties had more than seven times as many acres under cultivation in 1870 as in 1850, as is shown in the following table:—

III.

ACRES UNDER CULTIVATION, 1850 TO 1870.

	1850	PERCENT	1860	PERCENT	1870	PERCENT
Group I.....	744,000	14.8	2,902,000	22.2	5,337,000	27.6
Group II.....	1,590,000	31.6	5,101,000	38.3	8,839,000	43.2
Cook Co.	154,000	3.1	267,000	2.4	348,000	1.8
<hr/>						
TOTAL	1,744,000	34.7	5,368,000	40.7	9,187,000	45.0
State	5,039,000	100.0	13,096,000	100.0	19,329,000	100.0 ⁵²

The larger area in farms was accompanied by a greater yield of farm products, especially corn, wheat and oats. It was also accompanied by a greater diversity of farming, and the total production of the three staples, consequently, did not increase as rapidly as the acreage did.⁵³ At the same time the growth of the grain crops was large enough to attract attention. This was especially true of the central agricultural counties. The following tables show the increased yield of the three staples, but the figures for 1869 (census of 1870) were unduly small, owing to droughts, and to obtain a correct estimate of the increase during the decade the total should be considered about twenty-five per cent larger.⁵⁴

⁵¹Seventh, Eighth, and Ninth Censuses (1850, 1860, 1870), volumes on Agriculture.

⁵²*Ibid.*; for the counties comprised in each group, see Table II; per cent refers to per cent of total acreage contained in each county or group of counties. Group II includes Group I.

⁵³Seventh, Eighth, and Ninth Censuses (1850, 1860, 1870), volumes on Agriculture, Introduction.

⁵⁴*Ibid.*, 1870.

IV.

PRODUCTION OF CORN, 1850 TO 1870.

	1850	PERCENT	1860	PERCENT	1870	PERCENT
Group I.....	9,985,000	17.7	29,613,000	25.8	39,265,000	30.2
Group II.....	16,890,000	29.3	44,302,000	38.6	59,257,000	45.6
⁵⁵ Cook Co.....	429,000	.7	877,000	.7	770,000	.5
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TOTAL	17,319,000	30.0	45,179,000	39.3	60,827,000	46.1
State	57,646,000	100.0	115,174,000	100.0	129,921,000	100.0

V.

PRODUCTION OF WHEAT, 1850 TO 1870.

	1850	PERCENT	1860	PERCENT	1870	PERCENT
Group I.....	949,000	10.1	4,105,000	17.6	4,043,000	12.8
Group II.....	2,171,000	25.1	8,870,000	37.2	10,625,000	35.4
Cook Co.	238,000	2.7	299,000	1.3	149,000	.5
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TOTAL	2,409,000	25.8	9,169,000	38.5	10,774,000	35.9
State	9,414,000	100.0	23,837,000	100.0	30,128,000	100.0 ⁵⁶

VI.

PRODUCTION OF OATS, 1850 TO 1870.

	1850	PERCENT	1860	PERCENT	1870	PERCENT
Group I.....	1,275,000	12.0	2,330,000	15.4	10,619,000	24.8
Group II.....	3,174,000	30.2	5,865,000	38.8	20,421,000	47.7
Cook Co.	403,000	4.0	1,092,000	7.2	1,584,000	2.8
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TOTAL	3,577,000	34.2	6,957,000	46.0	22,005,000	50.5
State	10,087,000	100.0	15,220,000	100.0	42,780,000	100.0 ⁵⁷

These tables show not only a large increase in all crops, but also an especial emphasis, particularly in the corn belt, on the production of oats and corn instead of wheat. The increase in the production of wheat in the state between 1850 and 1860 amounted to 35.9 per cent, of corn 46 per cent, and of oats 50.5 per cent. At the same time the total amount of grain produced in the forty three counties along the Illinois Central (excluding Cook county) increased from 21,200,000 bushels in 1850 to 80,500,000 bushels

⁵⁵Seventh, Eighth, and Ninth Censuses (1850, 1860, 1870), volumes on Agriculture.

⁵⁶*Ibid.*

⁵⁷*Ibid.*

in 1870, or 369%. The number of sheep, cattle and swine on the farms will be taken up later on in this chapter.

Having seen the growth of grain production in the territory tributary to the Illinois Central it is possible to ascertain what influence these large crops had upon the railroad. In the preceding pages it was shown that the Illinois Central was placed in a very disadvantageous position in 1856 to 1870 in regard to shipping grain south to New Orleans and that economic conditions diverted western grain to Chicago and the east and west trade route. Although not to its interests, the "Central" was forced to yield to outside forces and make Chicago, not Cairo, its principal terminus for the handling of grain. The phenomenal rise of the former city as a grain center is a familiar story, and in the period under discussion the Illinois Central did as much as any other road to build up the interests of this city. It accomplished this result despite its unfavorable location. In studying the map of the Illinois Central one is impressed by its poor arrangement so far as shipments to Chicago are concerned. It is better situated than any other Illinois road for the handling of corn and oats from a large portion of the corn belt, but is in a weak position so far as wheat from the northern counties is concerned. To carry wheat from, say, La Salle county over its own rails it must send the grain south to Centralia and then north again to Chicago, or about three times as great a distance as that of the Chicago, Rock Island and Pacific route.⁵⁸ The same condition existed in the handling of grain from many of the counties on the main line north of Vandalia. This was obviated by traffic and trackage agreements, but not in a manner profitable to the "Central." Up to 1860, the Galena and Chicago Union line from Freeport to Chicago had an agreement with the "Central" by which the latter's business from points north and south of Freeport was sent to Chicago over the rails of the Galena road in the "Central's" cars.⁵⁹ Later a similar agreement was made with the Chicago, Burlington and Quincy from Dixon, but on somewhat less favorable terms. However, on most of the grain originating north of the Illinois river the Illinois Central obtained only the short haul to Freeport or Dixon, while the other railroad received liberal returns for carrying the cars to Chicago. Relations with the Galena or Burlington lines were not always friendly, and from 1858 to 1870 another means of uniting the main line and the Chicago branch was obtained. The Illinois Central assisted

⁵⁸Cf. Chap. iv.

⁵⁹*Annual Report*, Illinois Central Railroad, 1855-1859.

in the construction of the Peoria and Oquaka, now the Toledo, Peoria and Western branch of the Pennsylvania system, and made a trackage agreement with that company by which its trains could run from El Paso to Gilman over the latter's tracks. By this connection the two arms of the system were united one hundred and sixty miles above Centralia and the company was in a position to get the long haul on shipments to Chicago.⁶⁰

Other traffic agreements were made with roads intersecting the Central by which the latter got the haul to Chicago. Important among these alliances was one with the Great Western, now the Wabash, at Tolono and Decatur, the Ohio and Mississippi at Odin and Sandoval, the Alton and Terre Haute, now the St. Louis Division of the Big Four, at Pana and Mattoon, and the Mineral Point railroads.⁶¹ By far the most permanent alliance was the one with the Dubuque and Sioux City, which, as described above, was leased by the Illinois Central in 1867. By this arrangement all grain originating on the leased lines could be carried by the Illinois Central over the charter lines. Iowa, at this time, was a very important wheat growing district and most of the grain transferred at Dubuque was wheat. Naturally, this extension of the system had an important influence on the Illinois portion, and during the first few years of the lease control of the Dubuque and Sioux City was profitable to the Illinois Central.⁶²

During the time these various traffic and trackage agreements were being completed, the receipts of wheat, corn, and oats at Chicago over the tracks of the Illinois Central grew very rapidly. In 1855 only a part of the road was in operation and in 1856, 1857, and 1858 there were poor crops, while most of the land near the railroad had not yet been settled. As a result the receipts of grain at Chicago from this territory were small. In 1859, 1860, and 1861, and most of the remaining years of the decade crops were good and the shipments by the railroad increased to considerable proportions. Had it not been for the exceedingly low prices prevailing during much of the period from 1857 to 1862 and the large shipments south to Cairo from 1860 to the close of the war, the movement would undoubtedly have been much greater. The largest amount of any one grain con-

⁶⁰*Annual Report*, Illinois Central Railroad, 1857-1860. The Illinois Central had merely a trackage agreement with this company and in later years allowed other and rival railroads to control this company.

⁶¹*Ibid.*, 1855-1870.

⁶²Cf. Chap. VI, for statements as to net profits accruing to the Illinois Central from this lease.

sisted of corn, which increased from 758,901 bushels in 1858 to 6,903,430 bushels in 1867 and 10,475,680 bushels in 1871.⁶³ Wheat shipments grew at a somewhat slower rate, from 1,100,482 bushels in the earlier year to 5,244,540 bushels in the latter.⁶⁴ The amount of oats handled remained under half a million bushels a year up to 1865, when it jumped to 1,678,087 bushels and to 4,258,340 bushels in 1870. This rapid increase was brought about by the more general cultivation of this grain after 1860.⁶⁵

Compared with other railroads and the Illinois and Michigan Canal the Illinois Central was always one of the leading grain lines, and during the Civil War period it handled more grain than any other road, with the possible exception of the Chicago, Burlington, and Quincy. In 1858 the Central was third in its receipts of corn at Chicago, being surpassed by the Chicago, Burlington, and Quincy and the Illinois and Michigan Canal, with the Chicago and Northwestern only a few thousand bushels behind. In 1871 the Illinois Central handled more corn than any other line entering Chicago, and during the thirteen years increased its proportion of the total receipts from 8.1% to 24.8%.⁶⁶ In 1858 the "Central" was second in the receipts of wheat, which position it held in 1870, being led in both years by the Chicago and Northwestern. Its proportion of the total number of bushels reported, however, increased from 11.5% to 30.2%.⁶⁷ The growth in the handling of oats was even larger. From third place in 1858 the Illinois Central advanced to first place in 1870 and led its nearest competitor by two and a half million bushels. In the latter year it delivered 40.9% of all the oats received, as against only 4.9% in the former year.⁶⁸ Moreover, these figures do not include grain handled by the Galena or Chicago, Burlington and Quincy or Northwestern railroads for the Illinois Central on trackage agreements. Had this been included

⁶³*Annual Report*, Illinois Central Railroad, 1858, 1867, 1871. Itemized figures are not given before 1858.

⁶⁴*Ibid.* There is a slight difference between the figures given by the Chicago Board of Trade and the railroad due to different fiscal years.

⁶⁵*Annual Report*, Illinois Central Railroad, 1858-1870. Cf. Ninth Census (1870), volume on Agriculture, Introduction, under heading, Oats.

⁶⁶*Annual Report*, Chicago Board of Trade, 1858-1870.

⁶⁷*Ibid.*

⁶⁸*Ibid.* From 1867 to 1870 there is a discrepancy in the reports of the Illinois Central, and the figures given by the company cannot be given for the period.

the proportion belonging to the latter road would have been much larger. As it was, 27.2% of all the grain received at Chicago came in over the tracks of the Illinois Central, although the Burlington, Northwestern, and Rock Island systems had each a much larger mileage.⁶⁹

While the great bulk of the grain handled by the company, despite its efforts to divert the traffic southward, was forwarded to Chicago, the receipts at Cairo showed a healthy growth during the period, and for occasional years were almost as large as the receipts at the northern end of the road. Prior to 1860 the amount of wheat, corn and oats handled at Cairo was only nominal, but in that year, and the first few months of 1861, the southern movement assumed considerable importance as the result of energetic efforts on the part of the traffic department. River and railroad connections to Mobile and New Orleans were improving and the company believed this growth was permanent.⁷⁰ These prospects were rudely shattered by the outbreak of the Civil War and the occupation of Cairo by the federal troops entirely destroyed the southern grain trade. During the struggle a large proportion of the supplies furnished the Union armies in Kentucky and Tennessee were forwarded by way of Cairo, and the receipts at that city were larger from 1861 to 1867 than ever before. The demand for oats was especially large, and from 49,068 bushels in 1855 the movement increased to 4,629,408 bushels in 1864.⁷¹ The demands of the army for corn, although not as large as the demands for oats, were considerable and were supplemented by the requirements of the civil population of the South. Thus, the maximum receipts occurred in 1866, just after the close of the war, and amounted to 2,350,841 bushels, as against only 6,873 bushels in 1855.⁷² The war had practically no influence on the receipts of wheat and the tonnage of both wheat and flour increased until after the war. After the resumption of peace the receipts of all grains at Cairo continued large, but the amount received from year to year varied consid-

⁶⁹*Annual Report*, Chicago Board of Trade, 1858-1870; *Annual Report*, Illinois Central Railroad, 1856-1870, showing number of bushels of grain turned over to the respective connecting lines.

⁷⁰*Annual Report*, Illinois Central Railroad, 1860, 1861.

⁷¹*Ibid.*, 1861-1870. Most of the grain was destined, directly or indirectly, for the army.

⁷²*Ibid.*, 1855-1870.

erably.⁷³ Corn more than held its own in 1865, 1866, and 1867, but dropped to only 109,370 bushels in 1868, 23,460 bushels in

⁷³*Annual Report*, Illinois Central Railroad, 1855-1870. The following tables show the proportion of grain received at Chicago and Cairo from 1855 to 1870, being taken from the *Annual Reports*, Illinois Central Railroad.

VII.

COMPARATIVE RECEIPTS OF CORN AT CHICAGO AND CAIRO, 1855 TO 1870.

	TOTAL	CHICAGO	PERCENT	CAIRO	PERCENT	MISCELLANEOUS PERCENT
1855	902,600	402,105	44.5	6,873	.7	54.8
1857	679,843	242,115	36.7	6,116	.9	62.4
1858	993,571	758,921	76.3	4,187	.4	23.3
1859	943,967	780,943	82.7	22,823	2.4	14.9
1860	3,691,777	2,839,659	77.0	727,880	19.7	3.3
1861	7,724,399	5,341,303	69.1	2,119,320	27.5	3.4
1862	6,024,156	4,346,301	72.1	166,536	2.8	25.1
1863	4,149,999	3,597,331	86.5	17,863	.4	13.1
1864	2,339,653	1,721,749	73.5	228,508	9.3	17.2
1865	6,203,513	4,433,270	71.5	1,133,220	17.9	10.6
1866	8,024,035	5,443,824	67.8	2,350,841	29.4	2.8
1867	7,820,560	5,970,519	76.4	1,678,090	21.4	1.2
1868	5,844,930	5,844,930		109,370		
1869	5,717,890	5,334,260		23,460		
1870	5,114,130	3,533,310		287,880		

For some reason, the total number of bushels of oats, corn and wheat handled in 1868, 1869, and 1870, does not correspond with the statistics before 1868 and no percentages can be obtained for those three years.

The Miscellaneous item includes shipments turned over to connecting roads, such as the Ohio and Mississippi and the Galena and Chicago Union, or delivered at local stations. The large percentage in this column before 1860 shows the importance of the Galena and Chicago Union connection. In 1863, 1864, and 1865 considerable quantities of grain were turned over to the O. & M. for the use of the army.

VIII.

COMPARATIVE RECEIPTS OF OATS AT CHICAGO AND CAIRO, 1855 TO 1870.

	TOTAL	CHICAGO	PERCENT	CAIRO	PERCENT	MISCELLANEOUS PERCENT
1855	461,000	209,600	44.5	49,068	10.6	44.1
1857	670,424	160,265	36.7	95,881	14.3	61.8
1858	409,325	141,334	76.3	17,551	42.9	22.5
1859	622,449	137,596	82.7	294,595	47.3	30.7

1869 and 287,880 bushels in 1870, as against an average of over sixteen hundred bushels in the three preceding years. Oats decreased in a similar way in 1868 and 1869, but recovered in 1870. Wheat actually increased after the war. These fluctuations were much greater than at Chicago and indicate the lack of strength in the southern movement of cereals. In the aggregate the total number of bushels forwarded to Cairo as compared with Chicago was small, except during the six years from 1861 to 1867.⁷⁴

Next to grain the most important agricultural commodity carried by the Illinois Central was live stock—sheep, hogs and cattle. Conditions in the packing industry from 1856 to 1870 were radically different from what they are now and there were serious restrictions upon the development of the industry. Refrigerator cars were not in general use and the transportation of fresh meat was not possible. This prevented the centralization of meat packing in the West, which took place a few years later, and the shipment of pork, beef and mutton to the eastern states. Instead, most of the meat used in that territory was packed in local establishments from homebred live stock, or animals sent from the West on the hoof. Even the shipment of western live stock for slaughter in eastern cities was handicapped by the high cost of railroad transportation—shipment by lake being out of the question—and by the difficulty of carrying the animals long distances without great depreciation in value. Moreover, the number of small, local packing houses was large in the West as well as in the East. On the other hand great quantities of pork and beef were salted or pickled and in that condition could be carried long distances. Thus, the market for meat products was not confined entirely to the territory within a few miles of the packing house.

1860	1,329,108	202,967	77.0	934,007	71.1	13.1
1861	793,244	262,209	69.1	457,398	59.2	7.8
1862	1,760,066	534,659	72.1	427,693	24.2	45.4
1863	4,581,731	605,040	86.5	2,083,639	43.3	43.3
1864	7,794,095	214,158	73.5	4,629,408	59.5	13.0
1865	4,518,731	1,605,443	71.5	2,141,806	46.4	18.2
1866	4,002,825	2,358,285	67.8	836,115	20.4	20.9
1867	4,863,110	3,302,140	76.4	1,136,530	23.4	8.1
1868	5,082,090	5,082,090		350,900		
1869	3,830,620	4,015,590		522,340		
1870	5,641,870	4,258,340		1,414,180		

⁷⁴*Annual Report, Illinois Central Railroad, 1855-1870; cf. Report of the Delegates Appointed by the English and Dutch Shareholders, 1877.*

The conditions outlined above affected the Illinois Central in two ways. The high cost of transporting live stock prevented the use of the territory beyond the Mississippi until after the close of the Civil War, and made Illinois the natural center of the industry. Moreover, from 1856 to about 1863 or 1864 only that portion of the state within a hundred and fifty miles of Chicago, which even then was the center of live stock shipment, could send its sheep, hogs or cattle to market. But while this gave the central counties of the state an advantage over their competitors it limited the number of animals which could be slaughtered at Chicago or sent east from there to the packing houses on the Atlantic coast. As the number of farmers was comparatively small at this time, it was profitable for them to raise live stock, but restricted the number of cattle carried on the railroad. After the Civil War railway rates were reduced and the trans-Mississippi territory became a strong competitor of central Illinois.

There were other influences of a somewhat local nature which affected the industry in the counties along the Illinois Central. One of the most important of these was the cost of corn. Prior to 1860 corn on the farm was of little value and it was usually cheaper to feed it to swine or cattle than to attempt to ship it. Thus, the amount of grain forwarded from local stations along the railroad was much smaller than the large crops would have permitted. During the Civil War period the price of corn was high and the farmers found it more profitable to ship it in bulk than "on the hoof". After the war there was a decline in the price of corn, and the high prices of meat induced the farmers to raise a much larger number of animals than before.

As would be expected from these changing conditions, the number of live stock on the farms of the state fluctuated, although the general tendency was upwards. The central counties profited the most by this increase. Evidently the growers of the period did not find it profitable to fatten hogs and cattle entirely on corn, for the census returns show that the counties raising the largest amount of grain did not have the largest number of meat cattle. For some reason or other, possibly the high price of cotton which stimulated the production of wool as a substitute for cotton in the making of clothing, the number of sheep much more than doubled in the decade from 1860 to 1870 and nearly tripled

in the central agricultural counties along the Illinois Central Railroad.⁷⁵

In the decade from 1860 to 1870 Chicago became the leading packing center of the country, and, thus, afforded a market for the growing number of live stock in the state and especially in that portion near the Illinois Central. Prior to the war the Illinois Central ranked second among the railroads entering Chicago in the number of hogs and cattle received, being preceded by the Chicago, Burlington and Quincy and closely followed by the Northwestern, the Rock Island and the Alton.⁷⁶ During the war the high price of corn and other unfavorable conditions affected the Illinois Central more than the other roads, and it

⁷⁵The growth of the live stock industry in the state is shown by the following tables, which are taken from the census reports:

IX.

NUMBER OF SWINE ON FARMS, 1850 TO 1870.

	1850	PERCENT	1860	PERCENT	1870	PERCENT
Group I	251,187	13.1	449,079	17.9	581,178	21.5
Group II	620,536	32.6	1,110,097	44.3	1,074,946	39.8
Cook Co.	9,398	.5	13,587	.5	15,552	.6
TOTAL	630,934	33.1	1,113,684	44.8	1,094,467	40.4
State	1,915,907	100.00	2,502,308	100.0	2,703,343	100.0

X.

NUMBER OF CATTLE ON FARMS, 1850 TO 1870.

	1850	PERCENT	1860	PERCENT	1870	PERCENT
Group I	90,332	16.7	166,615	17.2	265,683	25.1
Group II	187,954	34.6	436,096	45.1	454,495	43.0
Cook Co.	11,155	2.6	14,432	2.00	14,431	1.4
TOTAL	199,109	37.2	455,408	47.1	468,926	44.4
State	541,209	100.0	970,799	100.0	1,055,499	100.0

XI.

NUMBER OF SHEEP ON FARMS, 1850 TO 1870.

	1850	PERCENT	1860	PERCENT	1870	PERCENT
Group I	138,403	15.5	111,669	14.5	292,605	18.6
Group II	285,964	32.0	163,514	21.2	593,368	37.8
Cook Co.	13,496	1.5	8,653	1.1	10,622	.6
TOTAL	299,460	33.5	172,167	22.3	603,990	38.4
State	894,043	100.0	769,735	100.0	1,568,286	100.0

⁷⁶*Annual Report*, Chicago Board of Trade, 1858-1861.

brought in the smallest number of any of the large systems.⁷⁷ Beginning with 1866 the territory tributary to the "Central" was better situated than its competitors, and the railroad again assumed second position, with the Burlington still ahead.⁷⁸ The other three important roads were not far behind, and excepting the Burlington, there was not a great difference between the number handled by each.

The shipments of live stock constituted an appreciable part of the traffic of the road. There were over four times as many hogs and cattle shipped to Chicago in 1870 as the average from 1858 to 1860. For instance, in 1870, the Chicago Board of Trade credits the railroad with receipts of 379,513 hogs, 87,915 cattle, and 89,597 sheep, equivalent to about eighty eight thousand tons.⁷⁹ This was equivalent to 6.5% of the total tonnage handled by the system in that year.⁸⁰ As the rates and the average haul of this class of freight were considerably greater than the average the business must have amounted to at least ten per cent of the gross earnings.⁸¹ The company endeavored to encourage live stock shipments, though entirely as an addition to the regular movement of grain, and the results, judging from the above, were satisfactory.

Nearly all the live stock handled by the company was sent to Chicago, and, in 1867, the last year for which complete data is available, 82.5% of the cattle, 85.8% of the sheep and 82.5% of the hogs were forwarded to that city. The demands of the local butchers were undoubtedly satisfied by animals driven into town on the hoof. Moreover, from a comparison of tables IX, X, and XI, it is evident that the shipments over the Illinois Central constituted a large proportion of the number of animals on the farms immediately contiguous to the railroad. Thus, from the rapid increase in the shipments to Chicago and the correspondingly rapid growth after 1860 on the farms, it is safe to assume that the live stock industry was a reasonably profitable one.

The minor lines of agriculture, such as truck farming, fruit growing, dairying, the production of hay, vegetables, etc., were

⁷⁷*Annual Report*, Chicago Board of Trade, 1861-1866.

⁷⁸*Ibid.*, 1866-1870.

⁷⁹*Ibid.*, 1870. The figures are not given by the railroad company. Sheep and hogs are estimated at 200 pounds each, cattle at 1000.

⁸⁰*Annual Report*, Illinois Central Railroad, 1870.

⁸¹*Ibid.*

comparatively unimportant. Except for a small territory adjacent to Chicago there was little demand for truck or dairy products. Small quantities of butter, eggs, cheese, and vegetables were carried on the railroad, but the aggregate tonnage or earnings were insignificant, never exceeding one per cent of the gross tonnage.⁸² As the territory adjacent to the Illinois Central, except a few counties in the northern part of the state, is not adapted to either truck farming or dairying this is not surprising. The amount of hay handled was also small and constituted a little more than one per cent of the gross tonnage and about the same proportion of earnings.⁸³

Fruit growing was more important. Southern Illinois between Cairo and Centralia was well adapted to fruit raising and by the close of the Civil War this region was sending considerable quantities of apples, peaches, strawberries, and other small fruit to the Chicago market. During the height of the season special trains were run from Cairo to Chicago on passenger schedule and the fruit was placed in the city in time for the morning markets. The railroad encouraged the development of this traffic by special service and reduced rates, and a large proportion of the perishable fruit supply of Chicago came from southern Illinois. Express rates were charged for the freight—not unreasonable considering the service and character of the commodity—but the total revenue was small. As late as 1870 only ten thousand tons of both vegetables and fruit were handled by the railroad.⁸⁴

On the whole, the Illinois Central developed the agricultural resources of the territory dependent upon it as much as could reasonably have been expected. While rates on grain, live stock, and other farm products were high and prevented a larger movement than took place, the railroad established as low charges as would yield it a good profit. Methods of operation common to all railroads of the period, the lack of a large tonnage, the geographical location of the line, the direction of traffic, all combined to make low charges impracticable. The Illinois Central was not the only railroad handicapped by these difficulties and, taking everything into consideration, it did as much to build up the portion of the state through which it passed as the Northwestern, Burlington, Rock Island, or Alton did to assist the counties of Illinois, Wisconsin or Iowa through which they ran. On the other hand, the farms of the state developed the railroad as much

⁸²*Annual Report*, Illinois Central Railroad, 1855-1870.

⁸³*Ibid.*

⁸⁴*Ibid.*

as the railroad developed their interests. The over sanguine prophecies of vice president Neal were not fulfilled until after the Civil War, but after the central part of the state once commenced to grow it turned over to the railroad all the grain and live stock it could handle.

Next to agricultural products lumber was the most important commodity handled by the railroad. Except along the streams central Illinois between Kankakee and Effingham was very sparsely wooded, and what timber was found was poorly adapted for fuel or building purposes. Necessarily, most of the lumber and wood used in this region had to be brought from places where timber was more abundant. In 1856 to 1870 there were three sources from which the supply came; (1) southern Illinois; (2) northern Illinois and southern Wisconsin; (3) the timber regions of the Northwest (handled by way of Chicago). As the amount of building going on during the settlement of the state was large in proportion to the population and as wood was the common fuel until long after 1870 the demands for lumber and wood were large.⁸⁵

Places along the main line and the Chicago branch as far north as Vandalia and Mattoon were supplied from the forests of southern Illinois. A small territory just south of the Illinois river depended on northern Illinois and southern Wisconsin. The remainder of the supply came from Chicago. Practically all the lumber that left the city by railroad was sent south over the tracks of the Illinois Central, and this one item amounted to over half of the total tonnage forwarded from Chicago by the company. At first the rates on lumber were placed so high it could not be transported more than a hundred to a hundred and fifty miles and the poorer wood from the southern part of the state was used in considerable quantities. Later improved methods of operation and the presence of a large number of empty cars in Chicago, arising from the excess of northbound over southbound shipments, enabled the company to reduce its charges. These reductions stimulated the growth of shipments from Chicago, and by the close of the decade from 1860 to 1870 nearly ninety per cent of the lumber handled by the railroad originated in Chicago.⁸⁶ At the same time the absolute tonnage forwarded steadily increased, though much more slowly than the general traffic of

⁸⁵Letters of David Neal and Robert Rantoul on resources of Illinois, in *Documents Relating to the Organization of the Illinois Central Railroad*.

⁸⁶*Annual Report, Illinois Central Railroad, 1867.*

the system. As the heavy movement of grain and live stock to Chicago greatly exceeded the return shipments of merchandise and miscellanies, the growth of the lumber traffic provided south-bound loads for a large proportion of the equipment. By this arrangement the cost of carriage of both grain and lumber could be reduced and lower rates established. The result was beneficial to the agricultural districts of the state in that it increased the price of their corn or wheat and decreased the cost of lumber and fuel.⁸⁷

The third largest single article of freight handled by the railroad was coal. As stated in Chapter I, there were three important coal fields near the Illinois Central: the Danville, Du Quoin, and La Salle mines. A few scattered mines were in existence, but their output was of slight importance. When the railroad was built it was supposed that the mines near Danville would ship large quantities of coal to Chicago by way of the Great Western, now the Wabash, to Tolono, and by the Illinois Central from there north.⁸⁸ The company was disappointed in this expectation and for various reasons, principally the competition of the Ohio coal, the tonnage handled was negligible.⁸⁹ The other two fields were of more importance. At first the mines at both places were handicapped by a high cost of operation, but as the country became more thickly settled and the mines larger this difficulty was removed. Their usefulness, however, was limited by the high railway charges in effect. In 1856 to 1870 the small amount of tonnage handled, the poor methods of operation, and other causes, made it absolutely impossible for the railroad to make low rates on such bulky goods as coal. From a cent to a cent and a half a ton-mile was the lowest charge the Illinois Central made under the most favorable conditions. As the coal fields were from two hundred to two hundred and fifty miles from a large market the high tariff prevented the transportation of coal to those markets. Under ordinary circumstances a hundred miles was about as far as the coal could be carried and the

⁸⁷The fact that the Illinois Central had a large return tonnage from Chicago was an important factor in keeping the rates on grain and live stock from advancing. Instead of the northbound freight having to stand the cost of carriage both ways, loaded up and empty down, it had to provide for only the upbound expenses.

⁸⁸Letter of D. Neal, *Documents Relating to the Organization of the Illinois Central Railroad*.

⁸⁹*Annual Report*, Illinois Central Railroad, 1855-1860.

production of the mines was limited to the demands of such a territory.⁹⁰

Moreover, coal, as a fuel, was forced to compete with wood. When the Illinois Central was built, wood was the universal fuel, and even the company's locomotives were wood burners. After a series of tests, the railroad began to use coal instead of wood on its engines, and, to increase its traffic, endeavored to stimulate the demand for "stone coal" as it was termed.⁹¹ For a long time the prejudice in favor of wood, supplemented by an abundance in districts near the mines, prevented its general use, and it was not until after the Civil War that coal was burnt to any considerable extent. Furthermore, Ohio or Pennsylvania coal, owing to the all water route, was much cheaper at Chicago than Illinois coal. Only a few mines on the Chicago and Alton, and Rock Island were in a position to compete with the eastern product.⁹² Under the circumstances, the market for coal mined on the Illinois Central was not great.

Nevertheless, there was a steady increase in product. Slightly over two hundred thousand tons, in addition to that used by the company, was forwarded from the mines in 1870. This was something over three times as much as was shipped in 1857, and thirteen times as much as in 1855.⁹³ From 1857 to 1864 the amount mined remained nearly stationary, but in the next seven years it increased to over two hundred thousand tons.⁹⁴ This was caused by the exhaustion of the forests, the growing demands for industrial purposes and the decline of the prejudice against coal. In 1870 it amounted to 14.9% of all the tonnage handled by the railroad. Both the rates and the length of haul were less than the average and the total gross receipts must have formed a much smaller percentage of the total earnings. Taking into consideration earnings and cost of service, coal was of less importance to the railroad than the live stock traffic if the two are compared on the basis of gross and net earnings. The chief value of the coal traffic was in its indirect benefits to the manufacturing and commercial interests of the state.

The least prominent of the industries of Illinois affecting the

⁹⁰J. W. Foster, *Mineral Resources of the Illinois Central Railroad*.

⁹¹*Annual Report*, Illinois Central Railroad, 1858.

⁹²The Chicago & Alton was the only railroad which brought any considerable amount of coal into Chicago. *Annual Report*, Chicago Board of Trade.

⁹³*Annual Report*, Illinois Central Railroad, 1855-1870.

⁹⁴*Ibid.*, 1870.

Illinois Central was manufacturing. As has been stated, Illinois was primarily an agricultural commonwealth in 1870, and the territory tributary to the "Central", aside from Chicago, was the distinctly farming portion. From Kensington to Cairo and from Centralia to Dunleith there were only three cities that were manufacturing centers of any prominence—Galena, Decatur, and Bloomington, and none of these places had any large industries. Even Chicago was not an industrial center of the first rank. Its commercial interests, such as shipping, the handling of lumber, live stock and grain and the transfer of freight between east and west lines, were very large, but it did not manufacture many kinds of merchandise which were consumed by the agricultural population of the state. Farm machinery and such goods formed the great bulk of the merchandise or miscellaneous shipments originating there.⁹⁵ In the remainder of the territory tributary to the Illinois Central manufacturing was confined to the production of simple articles for local use, the important lines being the making of boots and shoes, clothing, woodenware and other articles of wood, some farm machinery, whiskey and other alcoholic liquors. In 1860 less than one per cent of the total population of the counties between Shelby and La Salle were engaged in manufacturing, and the proportion in 1870 was not much larger.⁹⁶

Moreover, the products made in these village or city plants were those used in the immediate locality. With the exception of a few factories in Chicago and a much smaller number in the remainder of the Illinois Central territory the manufacturing establishments enumerated in the censuses did not send freight over the railroad. Nor did they bring in large quantities of raw material, since most of the goods they manufactured were made from materials raised locally or else were of comparatively small value. Thus, the total amount of freight handled to or from the manufacturies of the state was of much less importance than the products of mines, farms or forests.

However, there was a large tonnage of merchandise and sundries either brought from the east for domestic consumption or sent over the railroad for points beyond its rails. Including domestic manufactures, the absolute amount and relative proportion of this high class freight steadily increased from 1857 to

⁹⁵Eighth and Ninth Censuses (1860, 1870), volumes on Manufactures.

⁹⁶Eighth Census (1860), volumes on Manufactures and Agriculture.

1870. In the former year it formed 14.5% of the total traffic and 21.1% in 1870.⁹⁷ During this time the absolute tonnage increased from 64,298 tons to 283,756 tons, or 342%.⁹⁸ As most of the freight classed as merchandise or sundry was carried at rates higher than the average and for longer distances, the gross receipts in 1870 must have amounted to nearly a quarter of the total earnings of the road, while the net results from this traffic, presumably, were even more satisfactory. However, it is uncertain just what items are included in sundries, and, for that reason, the above proportion may be too large. Furthermore, much of the merchandise was carried at through rates which were very much lower than the local charges. This, again, may be a cause of error. At any rate, the tonnage and gross earnings of the two items make them second only to agriculture in importance.

The traffic of the railroad, viewed as a unit, increased quite as rapidly as did the special lines mentioned above. In 1855 the central part of the state was thinly settled, there was not a large amount of surplus product to be shipped, nor were the settlers able to purchase any considerable quantity of merchandise, lumber, salt, or other necessities or luxuries. But as the railroad became better established, the number of people in the tributary territory larger, and their purchasing power greater, there was a rapid development of the traffic of the road. In the sixteen years from 1855 to 1870 the number of tons of freight handled by the road as a whole, including the leased lines, grew nearly six fold and the number of ton miles nearly nine fold.⁹⁹ On the charter lines alone over five times as much tonnage was handled in 1870 as in 1855.¹⁰⁰ As the average rates remained about constant during the period gross earnings increased in about the same proportion as the number of ton miles.¹⁰¹ By 1870 the traffic on the Illinois lines was about all that the company was able to handle with its equipment and the

⁹⁷*Annual Report*, Illinois Central Railroad, 1855-1870.

⁹⁸*Ibid.*

⁹⁹*Ibid.*

¹⁰⁰*Ibid.*

¹⁰¹*Ibid.*

poor operating methods then in use, and this condition had existed since the commencement of the war.¹⁰²

The great bulk of the freight handled by the railroad was classed as local, that is, it both originated and terminated at the company's stations. In 1868 over ninety six per cent was local, and only four per cent through. In no year was the proportion of the latter to total traffic more than fifteen per cent, and usually it was less than ten.¹⁰³ Moreover, the local traffic increased more rapidly than the through traffic, despite the efforts of the company to increase its interchange business and to develop through connections. As the railroad reached the important distributing and receiving centers of the state over its own rails, through busi-

¹⁰²*Annual Report, Illinois Central Railroad, 1855-1870*; see following table:

XII.

INCREASE IN FREIGHT TRAFFIC; SYSTEM.

	TONS OF FREIGHT		NUMBER OF TON MILES		AVERAGE HAUL, MILES
1855	241,704				
1859	422,433		51,650,364		122
1870	1,623,944		265,409,371		163.43
INCREASE	1,401,511	333%	213,759,007	413%	41.43 34.8%

¹⁰³*Ibid.*; see following table:

XIII.

CHARTER LINES.

PROPORTION OF GRAIN, LIVE STOCK, LUMBER, COAL AND MERCHANDISE TONNAGE TO WHOLE TRAFFIC, 1850 TO 1870.

	GRAIN PERCENT	LIVE STOCK PERCENT	LUMBER PERCENT	COAL PERCENT	MERCHANDISE PERCENT	TOTAL PERCENT
1857	29	6.8	24.2	13.4	14.6	100.0
1858	30.8	6.3	23.6	15.1	14.6	100.0
1859	23.7	4.5	19.4	17.1	16.2	100.0
1860	44.0	4.2	15.3	10.3	14.5	100.0
1861	53.2	4.5	11.4	6.8	10.0	100.0
1862	48.2	5.8	9.9	7.5	13.8	100.0
1863	41.5	6.9	11.9	72.	19.0	
1864	39.8	6.9	13.4	10.0	18.0	100.0
1865	38.8	4.8	17.3	10.0	18.0	100.0
1866	43.1	5.2	14.3	13.1	16.5	100.0
1867	40.9	5.1	7.9	11.3	18.2	100.0
1868	35.3	6.3	16.4	15.2	20.3	100.0
1869	29.3	6.1	15.7	16.8	21.9	100.0
1870	30.6	5.9	15.2	14.9	21.0	100.0

ness was necessarily confined to shipments of merchandise and small quantities of miscellaneous articles. After the lease of the Dubuque and Sioux City the company had only one valuable traffic connection over which freight was sent on through billing—the St. Louis, Alton and Terre Haute, which included the Belleville and Southern Illinois, which crossed the lines of the Illinois Central at Pana, Mattoon, and Du Quoin. By means of this system through trains were run from St. Louis to Chicago, via Mattoon, and to Cairo, via Du Quoin. The line from Chicago to St. Louis handled a large share of the freight between those two cities and on the whole was very important. At the same time, the tonnage routed over this connection was only a small fraction of the total traffic of the system.

While local freight, in the technical meaning of the word, was much more important than through business, local traffic, in the common usage, referring to freight handled between local stations, was unimportant. Grain, lumber, merchandise, and live stock, the leading articles forwarded or received, originated at or were destined to the three main termini of the road, Chicago, Dunleith or Dubuque, and Cairo. Shipments between local stations were confined to coal, certain kinds of merchandise, and a few miscellaneous goods. At the most, less than thirty per cent of all the traffic on the road was carried between local stations.

As indicated in the previous pages the bulk of the traffic was seasonal, that is, most of the shipments were made in a few months of the year. In the fall grain was shipped north to Chicago and during the remainder of the year this kind of traffic was not of great importance. The same condition existed in the handling of coal, live stock, and, to a less extent, lumber. Moreover, the preponderance of agricultural shipments over merchandise and lumber meant that the inbound tonnage at Chicago and Cairo greatly exceeded the outbound.¹⁰⁴ Furthermore, except during the Civil War period, the bulk of the agricultural shipments were forwarded to Chicago, while the receipts at Cairo were slight.¹⁰⁵ However, the northbound and southbound traffic during the period from 1858 to 1870, inclusively, taken as a whole, was evenly balanced.¹⁰⁶

The large increase in traffic which commenced with 1860 was brought about by the general development of the country,

¹⁰⁴*Annual Report*, Illinois Central Railroad, 1855-1870.

¹⁰⁵*Ibid.*

¹⁰⁶*Ibid.*

and not by any marked reduction of rates. The tariffs on through freight were considerably lower in 1870, but, as stated above, local rates were higher during the latter year than when the railroad was put in operation.¹⁰⁷ However, the rates seem to have been as low as was necessary to move the traffic. Lower charges on certain articles such as coal and possibly lumber might have increased the tonnage turned over to the railroad, but it is almost certain that a reduction on the tariffs for grain and live stock would not have attracted a much larger traffic. As it was, the territory immediately adjacent to the Illinois Central increased its production of agricultural products at a much faster rate than the state as a whole and it is difficult to see how the country could have grown much faster than it did. In the few years immediately after the war, conditions were somewhat different, but the statements made above still hold good for that period.

Thus, it is safe to say that the Illinois Central Railroad, so far as freight traffic was concerned, fulfilled the object for which it was built. Compared with the results accomplished by other railroads in the central West, the achievements of the Illinois Central were as satisfactory as could reasonably have been demanded. The territory tributary to it made gigantic strides in agriculture, stock raising, mining, and manufacturing. The country was well settled and the population, as a whole, was prosperous and contented.¹⁰⁸

In the first few years in which the railroad was in operation the passenger business was of more importance than the transportation of freight. Before the war there was a large immigration into all parts of Illinois and a large proportion of these settlers used the Illinois Central railroad. Other reasons induced a large passenger traffic and during 1856 and 1857 there was a larger number of passengers carried on the railroad than in the years immediately following the war. The Civil War also had an important influence on travel over the railroad through the

¹⁰⁷Cf. Chap. vi.

¹⁰⁸These remarks do not apply to the years after 1868. After the war there were important changes in economic conditions in the central west. It became less and less profitable for the farmers to ship grain and the agriculture communities suffered severely. This dissatisfaction led to the Granger agitation of the early Seventies. However, these influences had just begun to affect central Illinois and the results were not sufficient to change the statement made in the text.

transportation of troops and the movement of persons to and from the armies south of Cairo. With the removal of the temporary stimuli to passenger traffic this part of the railroad's business became of less relative importance than in the period from 1855 to 1865.¹⁰⁹

The large traffic during the construction of the road and the Civil War was accompanied by extremely low rates. In order to induce settlers to come to Illinois and to develop the resources of the state the tariffs from 1856 to 1860 were very low. In 1857, the year of greatest travel, the average rate per passenger was only two cents a mile. Local tariffs were placed at four cents a mile, but most of the people using the road travelled for much less, and the charges for immigrant and excursion traffic were considerably below the average. During the war large numbers of troops were carried at approximately half rates and this made the charges appear lower than they really were. After 1865 conditions were normal and the local fare of four cents a mile seems to have been the universal charge.

The bulk of the passenger business, as of the freight, was local, but the proportion of through to local was much greater, as the number of passenger connections was larger than the number of freight connections. In 1860 fourteen railroads, besides those at Chicago, connected the Illinois Central with points east or west, and this number had increased to twenty ten years later. The most valuable of these connections were the eastern lines at Chicago; the Toledo, Peoria, and Western at El Paso and Gilman; the Toledo, Wabash, and Western at Decatur and Tolono; the St. Louis, Vandalia and Terre Haute and the Terre Haute and Indianapolis at Vandalia and Effingham; the Chicago and Northwestern at Freeport; the Chicago, Burlington, and Quincy at Mendota; and the Ohio and Mississippi at Odin and Sandoval. Taking the through passenger business as a whole the Illinois Central received about as many persons from other lines as it turned over to them, and the business was quite profitable.¹¹⁰

¹⁰⁹*Annual Report, Illinois Central Railroad, 1855-1870.*

¹¹⁰*Ibid.* The number of persons received from and delivered to each of the connections of the railroad is given in the annual reports. The summarized totals are as follows:

	1860	1870
Received	66,127	95,046
Delivered	73,686	102,286

Although the Illinois Central Railroad was built to fit into economic conditions in the upper Mississippi valley in which the important lines of trade were north and south, not east and west, it adapted itself, in the years from 1856 to 1870, to an east and west movement of western produce. Had the original plans of its promoters been carried out to their full extent, the Illinois Central would, probably, have built up the territory dependent on it to an even greater extent than it did. At the same time the profits to its owners and promoters would have been greater. As it was, economic conditions in the central West and upper Mississippi valley were such that the peculiar location of the railroad did not interfere with its usefulness. The Illinois Central was more influential than some of the distinctly east and west roads, such as the Northwestern or Rock Island, in building up the commercial interests of Chicago. Thus, the traffic history of this railroad from 1856 to 1870 presents the curious instance of a road built to develop one line of commerce, in the particular case, trade along north and south lines, actually doing more than any other company to build up trade on a competitive route.

Much of this success was due to an unusually fortunate combination of circumstances. The favorable location of the railroad, making it tributary both to the Great Lakes and to the Mississippi River; the phenomenal industrial development of the United States and of England, together with a considerable increase in the price of farm products; the exploitation of a rich and virgin agricultural territory at a time when the revolution in farming practice of the middle of the 19th century tremendously stimulated grain production; and the absence of all competition—in fact, practically every railroad touching the Illinois Central Railroad was tributary to it—all of these factors combined to make the period from 1861 to 1870 the most prosperous one in the history of the railroad.

However, most of these favorable influences were temporary in their effect. The agricultural resources of Illinois were limited and after 1870 most of the causes which had worked for the prosperity of the road before that time were to work for its impoverishment for several years afterward. The most important single influence, and one which was becoming influential even before 1870, was the extension of the trunk lines, i.e. Wabash, Pennsylvania, New York Central, Baltimore and Ohio, and Erie railroads, with their connections, directly into the territory of the Illinois Central Railroad. With these extensions

there followed a period of radical rate reductions which made it possible for these roads to divert grain from central Illinois directly east over their own rails, thus eliminating Chicago as a terminal for this territory and giving the Illinois Central Railroad only a short haul to junction points. While these events belong to the period after 1870 their influence commenced soon after the Civil War and made clear to careful observers even then the temporary nature of the railroad's prosperity during this period.

On the whole, however, notwithstanding these accidental influences, the period from 1857 to 1870 was one of solid traffic development. Central Illinois was settled; a prosperous agricultural population was made tributary to the railroad; numerous towns and cities were established; industries in these places and at Chicago were well under way; a number of coal mines had been opened and the coal introduced both for domestic and industrial purposes. These results constituted the outward achievements of the company. Supplementing them was the internal development of the railroad in the way of traffic organization and connections, the establishment of policies, and the perfection of the machinery of operation and management. Most important of all was the fact that the Illinois Central Railroad had built itself firmly into the very center of the economic organization of Illinois. Other systems might be stronger or larger, but no system has ever been able to supplant the "Central" in its hold on the industries of the state. What the Pennsylvania Railroad is to Pennsylvania, the New Haven to southern New England, and the Southern Pacific to California, that, though perhaps to a slightly less extent, the Illinois Central Railroad is to Illinois. Whatever else was won or lost during the period to 1870, the fact remains that during this time solid foundations were laid for the industries of central Illinois as well as for the traffic of the company. These results, moreover, were secured by a service more valuable than that rendered by any other railroad of the period. Thus, in 1870, the Illinois Central Railroad was established as the keystone in the economic organization of Illinois; for that purpose it was planned; for that purpose it was constructed; and the years from 1857 to 1870 were the years during which that purpose was fulfilled.

CHAPTER VI.

FINANCES OF CONSTRUCTION AND OPERATION, 1851 TO 1870.

As already indicated, financial difficulties connected with building a railroad through the center of Illinois prevented its construction before 1850. Three successive private companies and the state itself failed to secure the financial support necessary to complete the enterprise and it must have been with many misgivings that Robert Schuyler and his associates assumed responsibility for this previously illfated project.

Before 1851, the fiscal operations connected with the road were neglected. As far as can be found from the records of the Cairo City and Canal Company and of the state of Illinois, no definite estimates of cost of construction were ever made. In the Internal Improvement Act of 1837 a gross appropriation of \$3,500,000, only \$10,000 per mile, was made, and the Cairo companies evidently regarded this sum as sufficient.¹ Thus, one of the first duties of the promoters of the new company was to secure an approximate statement of the cost of the railroad. To make a regular survey was too expensive, and, as a substitute, Mr. Rantoul, late in 1850, through certain friends in the East, secured the cost of the Alton and Sangamon and seven leading eastern railroads. Upon these figures he prepared a preliminary estimate, which became the basis of the fiscal program of the memorialists. According to this statement, the total cost would vary from \$14,950,000 (\$23,000 per mile) to \$32,078,843 (\$41,681.81 per mile), depending upon length of line and character of construction.²

In financing the enterprise the promoters had three methods open to them. The one most common at that time, especially in the East and South, was to sell sufficient stock to provide for

¹*Session Laws of Illinois*, 1836-1837, p. 121; cf. Chap. II; also records of the various Cairo companies in the office of the Cairo Title and Trust Company, Cairo, Ill.

²*Illinois State Journal* (Springfield), February 12, 1851. The estimate was forwarded to Representative U. F. Lender.

most of the expenditures, this being supplemented, if necessary, by the issue of mortgage or income bonds. The second and less conservative method, nevertheless rapidly growing in favor, was to build the railroad by selling mortgage bonds, usually at a heavy sacrifice, and distribute the stock as a bonus to the promoters.³ With the Illinois Central there was a third possibility. The company had a federal land grant of from two and a half to three million acres of farming land and this allowed the company to pursue a policy entirely different from what would otherwise have been possible.

To the eastern capitalists the land grant was considered the most valuable part of the undertaking, and a few years later Mr. Richard Cobden expressed the opinion of these men very clearly when he said "It is not as a railroad investment that I regard so favorably this undertaking, but its value in my eyes depends on the landed estate. . . ."⁴ However, the value of even three million acres of rich prairie land, hundreds of miles from good transportation, was not great. Between every section of railroad land the federal government held another section, equally fertile, which it was willing to sell as low as two dollars and a half an acre. Six miles back from the tracks lay a vast, practically unoccupied stretch of government land, the maximum price for which was a dollar and a quarter an acre. At immediate sale, this enormous domain belonging to the "Central" would not yield over eight or ten millions of dollars, less than half the total cost of the railroad, and to supply the remaining millions themselves was not an inviting prospect to the promoters. To avoid this difficulty the directors adopted a plan by which the grant could be held until a large return would be received and yet the land remain the basis of all fiscal operations.

This policy was worked out in detail in the report made by President Schuyler to the board on April 23rd, 1851, the main features of which are as follows. The land grant was to be the basis of all financial operations, but to secure money for immediate expenditures, mortgage bonds would be issued. (1) All the railroad track, right of way, stations, etc., and two million acres of land, were to be mortgaged to the extent of \$21,400,000, which was then considered the approximate cost of

³Cf. Thompson, *Cost and Capitalization of American Railroads*.

⁴Mss. letter from Richard Cobden to Sir Joshua Walmsley, written from Midhurst, England, September 18, 1857. Original in office of the President, Illinois Central Railroad.

construction.⁵ These two million acres would be held for ten or fifteen years, and then sold at such prices that the cash realized would equal the total amount of bonds issued. The entire issue would be retired not later than the year 1875. (2) Two hundred and fifty thousand acres were set apart as a guarantee of interest on the mortgage bonds and could be sold at the discretion of the directors. (3) The remainder of the land amounting to something between one quarter and three quarters of a million acres, according to the exact route selected, was to be free land, that is available for any contingency. (4) The stock, equal in amount to the cash expenditures, was to be distributed as a bonus to purchasers of bonds, promoters, directors, or sold to outside parties, a moderate payment of \$5 to \$10 per share being made to meet incidental and extraordinary expenses.⁶

Thus, in return for an investment of a million or two dollars, the stockholders were to receive, free of debt by 1875, a first class trunk line, seven hundred miles in length, and five or six hundred thousand acres of rich Illinois prairie land, worth altogether eighteen to twenty million dollars. It was a business-like proposition to secure to the promoters of the Illinois Central the greatest profits ever realized to that time by a group of American capitalists. Had it not been for a serious underestimation of the cost of construction by Colonel Mason; the panic of 1857; and the Civil War—events entirely unforeseen in 1851—these prospects would undoubtedly have been realized.

President Schuyler's plan of April 23rd was based on Rantoul's statement, and definite action was necessarily deferred until Colonel Mason submitted his preliminary estimate in September, 1851. According to his report, the railroad would be 699 miles in length and for that distance the cost of roadway, buildings, equipment, and incidentals was placed at \$16,537,212, or \$23,600 per mile, as against \$21,400,000 allowed by Rantoul.⁷

⁵The lands were divided as follows:—

400,000	acres	inferior	agricultural	land	at	\$ 6	acre	\$ 2,400,000
1,200,000	"	"	"	"	"	10	"	12,000,000
300,000	"	superior	"	"	"	15	"	4,500,000
100,000	"	especially	valuable	"	"	25	"	2,500,000

TOTAL

\$21,400,000

⁶Letter of Robert Schuyler to Board of Directors, April 23, 1851, in *Documents Relating to the Organization of the Illinois Central Railroad*; cf. mortgage of September 13, 1851, in same pamphlet.

⁷Report of President Schuyler to Board of Directors, September 12, 1851.

The schedules were prepared with great care and represented a reliable estimate of the cost according to prices current in the summer of 1851. At the same time, either through errors in the surveys, wrong estimates of bridge work, grading, and buildings, or else through a desire to present to the outside world as favorable a showing as possible, the report greatly underestimated the cost of construction. The seriousness of this error is shown by a difference of \$10,030,805.61 between the estimate of September, 1851, and the actual cost to December 31st, 1857.⁸ For an engineer of Mason's standing this difference of 60.5% was inexcusable, and many subsequent financial difficulties were caused by this mistake.

With the estimated cost of construction decreased from \$21,400,000 to \$16,500,000, the directors deemed it wise to decrease the amount of money to be borrowed to \$17,000,000. Accordingly, on September 13, 1851, the Illinois Central Railroad Company mortgaged its right of way, track, buildings, and two million acres of land, but not the rolling stock or remaining five hundred thousand acres of land, as security for \$13,000,000 seven per cent, and \$4,000,000 six per cent, coupon bonds, due in 1875, with interest payable semi-annually in gold. The main features of the mortgage were the same as outlined in the president's report of April 23, 1851, with the exception of the size of the mortgage.⁹ Three trustees were appointed to handle matters relating to the mortgage. Two of these were appointed by the Governor of Illinois and the third by the company.¹⁰

In the charter the amount of capital stock was fixed at one million dollars and could be "increased . . . to any sum not exceeding the entire amount expended on account of said road."¹¹

No restriction, other than the above, was placed on the issuing of stock, and the directors had entire power to fix the terms of sale. Accordingly, in line with the letter, and perhaps with the spirit, of the charter, the directors determined to keep the stock at an amount equal to the total cost of the railroad, irre-

*Construction expenditures to December 31, 1857,	\$26,568,017.61
Estimate of September 12, 1851,	16,537,212.00

DIFFERENCE

\$10,030,805.61

⁹Mortgage of September 13, 1851. *Documents Relating to the Organization of the Illinois Central Railroad.*

¹⁰John C. Moore and Samuel C. Lockwood were appointed by Governor French, and Morris Ketchum represented the railroad.

¹¹Act of February 10, 1851 (Illinois Central Charter), sec. 4.

spective of the cash paid in by the shareholders. Originally this amount was fixed at \$17,000,000, but later was increased to \$25,500,000.¹² Under the president's plan, the bonds, and ultimately the land grant, were intended to provide funds for construction, and the stock was to be assessed only a nominal amount, say \$10 to \$20 per share.¹³

The charter provided that \$200,000 should be deposited with the state treasurer as a guarantee of good faith and that \$20 per share should be paid on the first one million of stock. Immediately after the company was organized one million dollars was subscribed by the incorporators and \$50,000, or \$5 per share, paid in to provide for the various expenses of organization.¹⁴ Shortly afterwards this first assessment was increased to \$20 per share and another million dollars subscribed. A payment of \$10 per share was asked on the second issue. This gave a total of \$300,000 received from the first two issues of stock (\$200,000 from the first issue and \$100,000 from the second). As a guarantee that the road would be built two hundred thousand dollars was deposited with the banking firm of Ketchum, Rogers, and Bement and with Mr. John Griswold, of New York, subject to the order of the state of Illinois.¹⁵

The receipts from the sale of the first two million of stock paid the expenses of organization, but by winter it became necessary to secure adequate funds for construction, and, in accordance with President Schuyler's plan, mortgage bonds were issued. In 1851, after several years of depression, the country entered upon a period of great financial prosperity during which there was a heavy demand in the United States and Europe for good investment securities and the directors of the Illinois Central were able to take immediate advantage of the favorable financial situation.

¹²*Chicago Daily Democrat*, August 17, 1853; also *Annual Report*, Illinois Central Railroad, 1855, 1870.

¹³Report of President Schuyler, September 12, April 23, 1851.

¹⁴*Chicago Daily Democrat*, August 17, 1853.

¹⁵At this time Mr. Moore was severely criticized for depositing the money with men connected with the Illinois Central, but there is no ground for believing that he was influenced by other than business motives. Messrs. Griswold, Ketchum, Rogers, and Bement paid the state interest at five per cent and gave as security additional certificates of deposit more than covering the money borrowed. See letter of John Moore, dated Springfield, January 24, 1852, quoted in *Chicago Daily Democrat*, February 6, 1852.

According to newspaper reports, one banking firm had already agreed to take the entire \$17,000,000 at par or over, when a slight stock market flurry occurred, preventing completion of the arrangements.¹⁶ Probably the real reason was that investors hesitated to advance such a large amount before a shovelful of earth had been removed.¹⁷ This made it necessary to reduce the issue to four or five millions, and numerous offers were made for the smaller amount, including, it is said, a very flattering proposition from the Rothschilds.¹⁸ The success of the smaller loan was immediate. By December, 1851, bankers in New York, Boston, and Philadelphia had promised to take \$4,000,000 seven per cent bonds at par, and in February, 1852, the negotiations were completed.¹⁹ The sale at once placed the credit of the Illinois Central on a sound basis, and showed that it could borrow money on as good terms as well established roads like the Hudson River and the New York and New Haven railroads. It also enabled the company to pay cash for all construction work.²⁰ The success of the undertaking was thus assured.

Even before the mortgage had been signed, plans were made to place part of the loan in Great Britain, and in August, 1851, ex-secretary of the treasury Robert J. Walker and vice-president David A. Neal were appointed as agents to visit Europe. They reached London in November and before selling any bonds they spent several months disseminating information in regard to the "Central"; consulting bankers, brokers, and investors; and making arrangements with manufacturers of railroad materials.²¹ The results were entirely satisfactory. Before the formal announcement on June 12th, 1852, a large number of investors and manufacturers had promised to take bonds, and within a few weeks after the bids were asked for, the entire amount was disposed of at a small premium.²² The strength of the company's credit was illustrated in a striking way when a number of large rail makers took bonds rather than cash in payment of materials purchased. It was also emphasized by the fact that the whole

¹⁶*Chicago Daily Democrat*, November 5, 1851.

¹⁷See editorials in *American Railway Journal*, December, 1851. Mr. Poor was editor of the *Journal* and my conclusions are based very largely on his editorials.

¹⁸*Chicago Daily Democrat*, November 5, December 15, 1851.

¹⁹*Ibid.*, February 16, 1852.

²⁰*Ibid.*, February 15, 1852.

²¹*Ibid.*, September 8, 1851.

²²*Railway Times* (editorial), June 12, 1852; *ibid.*, advertisement.

loan of £1,000,000 sterling, or five millions of dollars, although most of it²³ was bearing only six per cent interest—one per cent less than the New York issue—was over subscribed at a small premium.²⁴ However, the British purchasers were allowed to subscribe to five shares of stock for every \$1000 bond and as Illinois stock, subject to possible assessments of \$80 per share, was selling at or near par, many investors bought high grade bonds to secure such valuable stock.²⁵ Thus, by August 1st, 1852, \$9,000,000 of six and seven per cent bonds had been sold at par.²⁶ On the other hand, the shareholders had contributed only \$300,000.

From June, 1852, to June, 1853, there was a small increase in the amount of stocks and bonds outstanding. No new bond issues were sold, but a number of contractors and manufacturers agreed to take bonds instead of cash in settlement of contracts. Likewise, subscriptions from contractors and manufacturers, stock subscriptions by purchasers of six per cent bonds, and purchases by investors generally increased the amount of stock outstanding.²⁷ Furthermore, on June 15th, 1853, seven per cent bonds to the amount of three million dollars were disposed of at par, although it is probable that nearly all of this loan had been unofficially promised several months prior to that time.²⁸ Thus, by August 1st, 1853, 109,293 shares of stock had been subscribed. Payments from \$5 to \$20 per share were made, and the total amount received was \$746,465, while \$13,086,000 of bonds had been sold or contracted for, of which \$6,195,117.66 had been paid.²⁹ All of the bonds had been disposed of, at or above par, and, including differences in exchange and discount, there was a premium of \$84,014.27. Miscellaneous accounts, principally bills payable, brought the total cash receipts to \$7,840,525.68. Construction and general office expenses, interest charges, and the cost of organization took \$6,558,216.45, leaving a nominal bal-

²³Of the \$5,000,000, \$1,000,000 bore seven per cent interest, and the remainder, \$4,000,000, bore six per cent.

²⁴*American Railway Journal*, May 14, 1853; also official statement of *Daily Democrat*, August 17, 1853.

²⁵*Railway Times*, June 12, 1852; also miscellaneous editorials, advertisements and notices during July, 1852.

²⁶Statement of the treasurer, *Chicago Daily Democrat*, August 17, 1853.

²⁷*Ibid.*; also *Railway Times*, June 12, 1852.

²⁸*Ibid.*

²⁹*Ibid.*

ance of \$1,382,309.23. After deducting current liabilities, however, this was reduced to \$370,232.45.³⁰

This is a favorable report, and had the financial situation remained the same in 1854 as in 1852 and 1853 there would have been no danger from the small cash balance. However, these years had been times of tremendous expansion in all lines of business and the demand for new capital was so great that it was soon impossible to borrow on anything like reasonable terms. When ten per cent bonds of reputable companies such as the Ohio and Mississippi were selling at sixty or seventy, it was out of the question to dispose of six and seven per cent Illinois Central bonds at par. The money market was also affected by the outbreak of the Crimean war which created large additional demands for money, especially in England and prevented free investment in industrial and railroad securities. By the middle of October, 1853, the six per cent bonds, which only a few months before had been eagerly sought for at a premium, were selling for 95,³¹ and by the last of April a further drop of fifteen points had taken place.³² This rapid decline was accentuated by the actions of President Schuyler. He was president of the New York and New Haven Railroad, as well as of the Illinois Central, and in the name of the former company he had fraudulently issued a million of stock, selling the same for the personal profit of himself and friends. The leading railroad magnate of his time and a prominent stock exchange broker, his defalcation had a disastrous influence on the stock market. A Wall Street panic commenced on the 24th of July, the day his embezzlement became known, and securities dropped rapidly in price.³³ The effect on the Illinois Central was especially damaging. Robert Schuyler, its president, was a fugitive in Canada and Gouverneur Morris, one of the leading directors, was a bankrupt. The stock declined over forty points in a few days and seven per cent bonds became a drug on the market at 63.³⁴ With its treasury depleted and payments on

³⁰Statement of the treasurer, I. C. R. R., *Chicago Daily Democrat*, August 17, 1853.

³¹*Railway Times*, October 24, 1853.

³²*Ibid.*, Feb. 4, 1854; seven per cent bonds sold at 81½ to 81¾; *ibid.*, July 22, November 24, 1854.

³³*Railway Times*, November 14, 1854; editorial references in each number July 24 to November 11, 1854; cf. New York and Chicago newspapers of the same dates.

³⁴*Ibid.*

millions of dollars worth of construction work due within the year, the situation was critical.

Fortunately at this time Mr. W. H. Osborn, who, more than any other person connected with the road, had helped to place its finances on the substantial basis of today, assumed complete control of the financial affairs of the company. From August 1st, 1853, to December 31st, 1857, not quite four and a half years, a total of \$23,339,722.76 was expended on construction work and interest payments. After deducting bills and accounts payable, the company, at the commencement of this period, had only \$370,232.45 in cash, leaving some twenty-three million dollars to be raised within this short period. Against these expenditures, the company had potential assets to the extent of eight millions in the form of unpaid installments on bonds already subscribed. However, a large proportion had been taken by contractors or manufacturers in payment of work or supplies, and when the bonds dropped below par they refused to accept anything but cash in settlement of their contracts. Thus, less than six million dollars was actually received in cash from these unpaid installments.³⁵ At the same time rapid increases in the price of raw material and the wages of laborers forced the contractors to demand a larger compensation for work already commenced. These demands the company was bound to respect, in order to prevent a complete demoralization of the work through contractors giving up their contracts.³⁶ Under the circumstances the directors were forced to sell construction bonds at a discount. The charter prohibited this, but by the act of February 27, 1854, this restriction was removed.³⁷ As early as February, 1854, the company sold bonds at a small discount, and in spite of the low quotations for Illinois Central securities further issues were sold at current market rates, sometimes as low as only \$600 per bond.³⁸ Thus, by the 31st of December, 1857, the management had disposed of approximately four and a half millions of seven per cent bonds at 65, as against par for six per cent issues sold in 1852 and 1853.³⁹ Including instalments on loans made prior to 1854, i.e. the four and five million loans of 1852 and the three million loan of 1853, the company realized \$9,192,784.38 in cash from con-

³⁵*Annual Report*, Illinois Central Railroad, 1855-1857.

³⁶*Railway Times*, May 5, 1855 (Satterthwaite's Report).

³⁷*Session Laws of Illinois*, 1853-1854, February 27, 1854, secs. 2, 3.

³⁸*Railway Times*, May 5, 1855.

³⁹*Ibid.*

struction bonds from August 1st, 1853, to December 31st, 1857.⁴⁰ For the four and a half million sold in this period the company received only \$2,900,000, or \$650 per bond.

By selling these four and a half million dollars of bonds at 65 instead of par, the company decreased its receipts by approximately sixteen hundred thousand dollars, while, from various causes, cost of construction was increased by several millions. To meet this deficit in receipts the management resorted to the three hundred thousand acres of free land reserved by the mortgage of 1851, and in 1855 an additional mortgage, covering \$3,000,000 seven per cent Free Land bonds of 1860, was placed on the railroad and on the free lands.⁴¹ The change that had come over the financial position of the Illinois Central is strikingly illustrated by the results of this loan. Only \$2,079,876.61, or \$694 per bond, were received. Including the discount, this was equivalent to about fifteen per cent for the five years the bonds ran, as against slightly under six per cent for the London loan of 1852.⁴²

Even the Free Land Loan of 1853 was not sufficient to meet construction expenditures and finally, in 1856, the company resorted to what was virtually a debenture note. In that year there was issued \$900,000 of eight per cent optional right bonds, payable at any time after 1858.⁴³ To make the notes more inviting to investors, holders of these securities were given an option on stock equal to the face value of the bonds.⁴⁴ This issue was disposed of at a higher average price than the Free Land bonds, as it realized \$945 per bond, equivalent, including discount, to about eleven per cent interest.⁴⁵ However, borrowing money on short time notes at eleven per cent to finance a partially constructed railway was a dangerous as well as expensive piece of financiering.

These loans did not provide the necessary capital, and to tide the company over the period of construction floating obligations in the form of bills and accounts payable were allowed

⁴⁰*Annual Report*, Illinois Central Railroad, August 1, 1853, 1855-1857.

⁴¹*Ibid.*, 1855, 1856.

⁴²*Ibid.* The interest on the money actually received (\$694 per bond at 7%) was 10.1%. In addition, the company had to pay \$1000 per bond in 1860, although it received only \$694. As the company had the use of the money for between five and six years this was equivalent to about five per cent more, making a total of fifteen per cent.

⁴³*Ibid.*, 1856.

⁴⁴*Ibid.*

⁴⁵*Ibid.*

to accumulate—a makeshift which eventually inflicted great mortification as well as financial loss upon the company. Accordingly, miscellaneous obligations were increased from \$812,076.78, on August 1st, 1853, to \$3,700,551 on October 20th, 1857. Against this liability the company carried in New York less than a hundred thousand dollars in cash or cash assets.⁴⁶

While pursuing these expensive, though perhaps necessary, expedients of selling bonds and notes at a heavy discount, the company continued its weak policy in regard to assessments on the capital stock. Prior to 1854, calls for only a nominal amount had been made upon the stockholders, and, on August 1, 1853, only \$746,465 had been paid, an average of \$6.80 per share.⁴⁷ In 1854 two assessments of \$10 and \$5 respectively were made⁴⁸ and this was followed the next year by two small calls of \$5 per share on the entire capital.⁴⁹ \$1,000,000 of new stock was also sold at \$25 per share. In the middle of 1857 another call of \$10 was made, but only partial payments were made during the summer.⁵⁰ By December 31, 1855, there had been received in cash \$2,571,050, or an average of \$19.93 on the \$12,925,600 outstanding. The next year this was increased to \$3,558,615,⁵¹ or \$25.20 per share on \$14,034,700.

Two additional sources were utilized during the period from 1853 to 1857, viz. net receipts from operation and sales of interest and free lands. Early in 1853 short portions of the road were put in operation, and the net receipts began to constitute an appreciable amount. From 1853 to 1855, inclusive, \$1,281,305.02 was received in this way.⁵² In 1856 cash sales of free and interest lands were important, the combined receipts to 1857 being as follows:

Net receipts from Operation.....	\$2,134,403.78
Net receipts Free & Interest Lds.....	1,148,049.22
<hr/>	
Total net receipts.....	\$3,282,453.00
Interest to Dec. 31, 1857.....	5,897,644.18
<hr/>	
Net deficit.....	\$2,615,191.18 ⁵³

⁴⁶Statement of the treasurer, August 1, 1853; *Annual Report*, Illinois Central Railroad, 1857; Fisher Report, *Railway Times*, June 19, 1858.

⁴⁷*Ibid.*

⁴⁸Viz. \$10 on 90,000 shares; \$5 on 129,346 shares; making a total of \$20 per share.

⁴⁹*Annual Report*, Illinois Central Railroad, 1855.

⁵⁰*Ibid.*, 1857.

⁵¹*Ibid.*, 1855, 1856.

⁵²*Ibid.*, 1855.

⁵³*Ibid.*, 1855, 1857.

Thus the net receipts from operation and land sales failed to meet the interest payments in this period by two million six hundred thousand dollars and the deficit had to be made good by assessments on the stock and by sale of bonds. In fact it was not until the year 1861 that receipts from free lands and the operation of the railroad paid all interest charges.⁵⁴

The various issues of short term notes and the accumulation of unpaid bills meant that from 1853 to 1857 the directors were forced into a hand-to-mouth financial policy, offset to only a partial degree by subscriptions to stock or sale of long time bonds. The result of this policy is shown by the condition of the treasury in 1857. Over three million dollars of bills and accounts payable were still outstanding, while the amount of cash actually on hand in New York did not exceed a few thousand dollars. The company had a large amount of bills and accounts receivable, time loans and other slow assets, and uncollected instalments on stock, but these assets were not available in case of a sudden market stringency.⁵⁵ Steps had been taken to remove these difficulties, but before they could be carried out there occurred the panic of 1857. The directors of the Illinois Central were unprepared for such a catastrophe; Mr. Osborn was in Europe at the time. Notes were presented for payment; the funds in the treasury at New York were very low, and though the company had eleven hundred thousand dollars to its credit in England and over a hundred thousand more in Chicago, it was impossible to draw bills of exchange at any reasonable discount. For the first and only time in its history the company was forced to suspend payment; the creditors, under stress of general financial failure, became urgent for their money; and, in the absence of the President, the Secretary made a temporary assignment of the property in order to prevent seizure of valuable assets by creditors.⁵⁶

On his return to this country, Mr. Osborn commenced energetic measures to restore the property to the stockholders. Funds were rushed from England; arrangements were made with creditors for extension of notes; and the directors used their personal credit to put the company on its feet. Mr. Osborn, himself, en-

⁵⁴*Annual Report*, Illinois Central Railroad, 1861.

⁵⁵*American Railway Journal*, quoted in *Railway Times*, November 7, 1857; *Annual Report*, Illinois Central Railroad, 1856; Fisher Report, *Railway Times*, June 19, 1858.

⁵⁶*Ibid.*

dorsed notes to the extent of several hundred thousand dollars.⁵⁷ Unpaid assessments were immediately collected; a call, payable September 25th, of \$10 per share, was made; and a further assessment of \$10 ordered early in 1858.⁵⁸ In the emergency, the stockholders supported the company loyally, and made prompt payment of the additional calls, often at great personal inconvenience. The crisis showed the danger of large balances of unpaid bills and to eliminate this evil the directors issued sufficient short term notes to pay off all such bills. Previously, they had found that the optional right bonds had been very successful, and the \$900,000 outstanding was now increased to \$3,200,000. Optional rights on 83,000 shares of stock were to expire between the first of June and the first of July and this formed the basis of the loan. The bonds were convertible into stock prior to February 20th, 1860, on the basis of twenty five shares of stock with \$40 paid in, for each \$1000 bond, and were to be redeemed on or before the 20th of February, 1868.⁵⁹ Although the interest rate was only seven per cent, the convertible feature was so attractive that something like \$2,558,000 were subscribed by the 1st of May, 1858.⁶⁰

These energetic measures accomplished their object, and by the close of the year 1858 the company was again on a sound financial basis. All the floating debt was either paid or otherwise provided for and the assignment was removed. During the fifteen months from October, 1857, to December 31st, 1858, between seven and eight million dollars were paid into the treasury of the company in cash or in various Illinois Central bonds in payment of stock, allowing the directors to retire the entire floating debt, with the exception of \$396,167.53, and to pay all construction and interest charges in full.⁶¹ Thus, through the efforts of Mr. Osborn and his associates, the company passed through the assignment with an untarnished record, and, in 1858, its credit was higher than it had been for six years. Though somewhat expen-

⁵⁷A number of the English investors accused Mr. Osborn of taking advantage of the company's condition to fill his own pockets, but this resulted from the strong feeling over increased stock assessments, and Mr. Osborn's long connection with the company, during which he was ably supported by these very same men, amply refutes this assertion. What compensation he received was by regular vote of the directors.

⁵⁸*Railway Times*, June 19, 1858; November 7, 1857; August 7, 1858; January 1, 1858.

⁵⁹*Ibid.*, January 1, 1858; August 7, 1858.

⁶⁰*Ibid.*, August 7, 1858.

⁶¹*Annual Report*, Illinois Central Railroad, 1855-1858.

sive, on account of the various financial expedients which had to be adopted, the crisis of 1857 taught the company a valuable lesson.

By 1859 all danger from the floating indebtedness had been removed but there still remained the Optional Right bonds of 1868 and the Free Land bonds of 1860. Under the mortgages these bonds could be retired in 1859 and 1860, and in those two years all notes and floating liabilities in excess of those included in strictly operating accounts, and the Free Land and Optional Right bonds, were cancelled, leaving the construction bond mortgage of 1875 as the only lien upon the property. Thus, at a late date, the company adopted a policy that should have been pursued from the commencement of the undertaking.

During the years 1857 and 1858 the shareholders had paid in an average of \$35 per share on stock which they supposed would cost them practically nothing, and judging from comments in the English press British investors in the Illinois Central were thoroughly indignant at the American directors. Meetings of shareholders were held, two special committees were sent to the United States, and the English stockholders and bondholders formed a permanent organization to supervise the affairs of the corporation.⁶² The continued assessments, stimulated by a strong bear movement on the exchange, forced down the price of both stocks and bonds and for a time many of the small shareholders were thoroughly frightened. The company was not yet in a position to ignore the stock market and accordingly, as a peace offering, the directors adopted two very important measures, both of considerable financial benefit to the shareholders.

The first of these was the Cancelled Bond Scrip Dividend. By 1856 the sales of land had been sufficient to cancel about \$600,-

⁶²Cf. *Railway Times*, November, 1857 to December, 1858.

The attitude of the more conservative investors is shown by the following letter written by Richard Cobden: "I do not change in the slightest degree my opinion in consequence of the fall in the Illinois.— That the stock will go up again to its former level I have no doubt. It is not as a railroad investment that I regard so favorably this undertaking, but its value in my eyes depends on the landed estate which is the noblest domain ever transferred in one conveyance. Nothing but an earthquake or some other convulsion of nature can impair the value of 2,600,000 acres of the richest soil in the world, situated in the midst of the most industrious & intelligent population.— The Wall Street 'bulls' and 'bears' will make no durable impression on such a property." Mss. letter to Sir Joshua Walmsley, Midhurst, September 18, 1857. Original in office of President, Illinois Central Railroad.

000 of the construction bonds and on July 12, 1858, as the result of strong pressure from the English shareholders, the management ordered that "whenever the amount of construction bonds cancelled in a year should amount to five per cent on the share capital of the company, certificates setting forth the amount so cancelled should be distributed pro rata among the shareholders and this scrip should be entitled to the same dividends as regular stock."⁶³ These dividends were continued until 1863, by which time the amount so distributed was \$1,772,270. After 1863 the profits from the land sales were divided among the shareholders in other ways.⁶⁴

The second was dated from May 27th, 1859, and entitled any stockholder who had paid up the full par value of his stock to receive four per cent interest per annum on the same until a regular cash dividend of at least four per cent had been declared. There had been previous interest dividends paid in cash, but they were sporadic, and this measure now offered an inducement to the shareholders to pay up their stock in full.⁶⁵

These measures had a very important influence on the stock account and encouraged the shareholders to pay up all unpaid calls and assessments. As a result the number of full paid shares increased from none in 1858 to 97,821 in 1863, and the cash received from all shares from \$3,558,615 in the spring of 1857 to \$15,654,980 in 1860 and \$17,543,700 in 1863.⁶⁶

During the three years ending December 31, 1860, expenditures for construction amounted to \$1,080,237.86 and the deficit in net earnings over interest charges to \$2,095,408.08, thus leaving \$5,622,899.06 to cancel bonds and miscellaneous obligations.⁶⁷ The Free Land bonds were paid off at maturity in 1860, and the optional right bonds were either redeemed by cash payments or converted into stock. This left the construction bonds of 1875 as the only funded debt. Moreover, receipts from land sales had reduced the amount outstanding in 1860 to approximately fifteen millions, as against a share capital of \$17,945,400, of which \$15,654,980 had been paid in cash.⁶⁸ This was a decided contrast to

⁶³Resolution of the Board of Directors, July 12, 1858, quoted in *Railway Times*, August 7, 1858.

⁶⁴*Annual Report*, Illinois Central Railroad, 1863.

⁶⁵*Ibid.*, 1855-1865; Resolution of Board of Directors, quoted in *Railway Times*, June 18, 1858.

⁶⁶*Annual Report*, Illinois Central Railroad, 1856-1864.

⁶⁷*Ibid.*, 1858-1860.

⁶⁸*Ibid.*, report of the Land Department, 1860.

conditions in 1853 when less than eight hundred thousand dollars had been paid by the shareholders.

The methods used to obtain money for construction purposes having been reviewed it is important to see where these millions of dollars went. To December 31st, 1857, when the railroad was in full operation, the expenditures for equipment and construction amounted to a total of \$23,436,668.32, or \$33,198 per mile, to which should be added interest during the period of construction. Including all proper construction charges, the total expenditures for permanent improvements chargeable to capital were as follows:—

Construction charges to December 31st, 1857.....	\$23,436,668.32
Interest charges to Dec. 31, 1856.....	\$4,874,279.59
Less net repts. from operation.....	1,742,930.30 3,131,349.29

TOTAL COST OF THE ILLINOIS CENTRAL.....\$26,568,017.61⁶⁹

While the aggregate cost is high there seems to be no reason to question the correctness of the accounts. In 1857 the Illinois Central Railroad was undoubtedly the best built road in the West; ample terminal and yard facilities existed; right of way and station grounds were more than sufficient for the existing business; bridges and culverts were usually of stone or iron and always substantial; grades were light, curves were of large radius, and tangents constituted about ninety per cent of the line; the equipment was up-to-date in every particular, ample in amount, and well built; on the whole roadbed and equipment were sufficient to provide for traffic several times that of 1857. There were occasional misappropriations of funds, poor contract work, and speculations, but there was not that organized corruption and mismanagement characteristic of many of the land grant roads. The company itself did most of the construction work and all contracts were satisfied in cash or bonds at par. Moreover, the officials of the company were able to secure supplies and labor at low prices. The average wages of employees did not exceed those paid in the eastern states; nearly all of the iron was pur-

⁶⁹*Annual Report, Illinois Central Railroad, 1855-1857.*

The interest charge is based on the following assumptions: (1) the road was not in completed condition until December 31, 1857; (2) interest, less net receipts from operation, should be allowed from the time individual sections were opened until the whole was in complete operation. These assumptions are not absolutely correct, but the above plan seems to be the best basis for determining interest during construction.

chased in England at very low prices; and the right of way, which to-day is worth a fabulous amount, was secured at a nominal cost. Three times the English shareholders sent a special committee to this country to audit the construction accounts of the Illinois Central; they were given complete access to all vouchers and original records; and in their published reports the three committees state emphatically that, so far as they could discover, the accounts were honestly kept, and no fraud or speculation of any extent was found.⁷⁰ Moreover, from a comparison of detailed expenditures of the Illinois Central with those of several other roads⁷¹ it appears that, in the majority of cases, the Illinois corporation paid lower unit prices for material than any of these companies. The amount of interest seems somewhat excessive, but this was made necessary by the size of the railroad, which prevented efficient operation of the road until the whole was completed in 1856. Therefore, it is safe to say that the \$26,568,017.61 given above is a reasonable and bona fide statement of the actual expenditures and is a proper charge to capital.⁷²

It is not possible to make so favorable a statement in regard to the wisdom with which part of this money was spent. Throughout the early history of the company the directors held rather exaggerated views of the traffic possibilities of the road. They also adhered to the English system of building a railroad in a thoroughly substantial manner. It goes without question that the heavy initial expenditures materially reduced operating expenses, but it is also true that a much lighter construction would have answered the needs of that period just as well, and the company would have been saved interest charges on expenditures, which were useless for many years. For instance wooden trestles would have answered as well as stone culverts; frame stations might have been used instead of brick; and similar inexpensive, but serviceable, equipment could have been used to advantage in many places.

⁷⁰Ackerman, *Historical Sketch of the Illinois Central Railroad*. Viz. *Railway Times*, November 27, 1858; *ibid.*, June 19, 1858; *Report of the Committee of Dutch and English Stockholders*, 1876.

⁷¹Viz. New Orleans, Jackson & Great Northern; Mississippi Central; Mississippi & Tennessee; Ohio & Mississippi; Michigan Central.

⁷²With different methods of accounting used in the fifties it is impossible to obtain an absolutely accurate statement of expenditure at that time. However, the figures may be regarded as absolutely correct for the first two places. The smaller amounts are retained to conform to the figures of the company.

The period from 1850 to 1857 was a time of construction; the years from 1857 to 1870 were years of enormous traffic development which necessitated large additions to capital. Gross earnings rose from \$2,300,000 in 1857 to \$8,700,000 in 1870, or an increase of 266%, while the number of tons of freight moved one mile increased from fifty million to two hundred and sixty five million, or 430%.⁷³ At any period of railroad history, such an enormous development would have demanded heavy capital expenditures, but with the poor operating methods then in vogue the amount of equipment had to increase in almost direct proportion to the growth of tonnage. The greater number and weight of trains also necessitated many improvements of the property. In the thirteen years ending December 31st, 1870, the charges to capital amounted to \$7,084,421.10, bringing the total cost in 1870 to \$33,653,339.71, or \$47,710 per mile. This amount was distributed as follows:—

Construction	\$4,317,169.05
Equipment	2,767,252.05
TOTAL	\$7,084,421.10⁷⁴

In addition to the money expended on the Illinois Central proper, a few thousand dollars were applied to capital account on the Iowa leased lines, but this is not included in the total.⁷⁵

⁷³*Annual Report*, Illinois Central Railroad, 1857-1870; the last three years include earnings of 200 to 402 miles in Iowa, amounting to between a million and a million and a half a year.

⁷⁴*Ibid.*

⁷⁵*Ibid.* The expenditures for Permanent Improvements were distributed as follows:

Bridging	\$ 496,016.59
Ballasting	401,865.55
Sidings	495,624.06
Lake shore Protection	292,416.23
Real estate	163,115.91
Rails	49,223.60
Ties
Fencing	74,815.79
Telegraph	36,674.16
Engineering	40,953.92
Gen'l Expense	420,360.65
Buildings	951,108.45
Masonry	119,172.83
Roadway	261,237.54
Miscellaneous
	\$4,317,169.05

Statements have been made that in the Civil War period and the years immediately thereafter the permanent improvement account of the Illinois Central was unduly increased at the expense of operating charges.⁷⁶ There is just enough truth in the statement to make necessary a somewhat thorough explanation. Prior to about 1872 or 1873 maintenance expenditures were very high even when compared with present expenses on the system,⁷⁷ and it is improbable that with such liberal appropriations the property would run down. The company also had a very good system of accounting and the accounts were as accurately distributed as on any railroad of the time. The following statement of the Board of Directors approved by them on February 6th, 1874, shows the attitude of the company towards this matter:—"It should be noted that upon the plan of making up the construction account followed by most railways, our charge to construction expenditures would be considerably increased, owing to the fact that, during the last ten years, extensive improvements and additions have been made to your property, which might have been charged to capital account, but have been included in working expenses."⁷⁸ Moreover, with the exception of the years 1865 and 1866, the net receipts from operation greatly exceeded the fixed charges and dividends, and consequently, there was no motive to increase the capital account at the expense of operating charges.⁷⁹ Thus, it seems entirely reasonable to accept

Locomotives	\$1,071,944.08	
Freight cars	1,389,385.64	
Coal cars	10,985.22	
Passenger cars	140,151.49	
Shop machinery, etc.	141,963.31	2,767,252.05
<hr/>		
TOTAL		\$7,084,421.10

⁷⁶In the report of the English and Dutch Committee of 1876 it was claimed that up to that time many items, properly chargeable to operation, were included in capital accounts.

⁷⁷For instance, in 1867, the year the Iowa lines were taken over, but before the lease had affected conditions in Illinois, the expenditures for maintenance were:—

Bridges, \$123; buildings, \$135; labor, \$1,672; total maintenance of way, \$2,080 per mile; repairs, locomotives, \$3,060 per locomotive; repairs, passenger cars, \$1,378 per passenger car; repairs, freight cars, \$87 per car; total maintenance of equipment, \$1,470 per mile. *Annual Report, Illinois Central Railroad, 1867.*

⁷⁸Quoted in *Annual Report, Illinois Central Railroad, 1874.*

⁷⁹*Annual Report, Illinois Central Railroad, 1857-1870.*

the company's statement of permanent improvements for this period. As the greater proportion of the permanent improvements were paid for out of surplus receipts—in other words, at the expense of possible dividends—it may be taken for granted that reasonable economy was exercised. However, as explained at greater length on page 18, the Illinois Central diverted a part of the receipts of the Land Department from the purposes outlined in the mortgage of September 12th, 1851, and had this not been done there would have been a deficit in some of the years. In no year did the net earnings and "proper" receipts from the Land Department equal the interest and dividend payments. As a result the company virtually paid dividends out of capital. While this policy disregarded the spirit of the mortgage of 1851 and was not as conservative as might have been desired, it is unreasonable to accuse the company of a serious error in accounting.

In the period before 1857, practically all the expenditures for permanent improvements or construction, came from the sale of bonds; after 1857 net receipts from operation and sale of lands, and assessments on stock, paid the major portion of such charges. From 1861 to 1870, net receipts from sales of free and interest land and from operation exceeded dividends and fixed charges by \$2,381,203, however, the fixed charges and interest dividends from 1857 to 1860 exceeded the net earnings by \$1,809,613.13, leaving a net surplus for the thirteen years of only \$285,794.95.⁸⁰ The deficit of interest and dividend payments over net receipts from operation alone amounted to several million dollars.⁸¹

In President Schuyler's financial plan of 1851, the funded

⁸⁰*Annual Report*, Illinois Central Railroad, 1857-1870.

⁸¹From 1857 to 1870 there were received in cash from the shareholders \$12,880,265, to which should be added the net surplus of \$285,794.95, making a total of \$13,166,059.95. During this period various expenditures not chargeable to operation were as follows:—

Permanent Improvements	\$ 7,084,421.10
Redemption Free Land Bonds, Optional Right Scrip, current liabilities, etc. (approximately).....	6,500,000.00
TOTAL	\$13,584,421.10
Received from stockholders and net surplus from operation	13,166,059.95
DIFFERENCE	\$ 418,361.15

This difference would be accounted for by the surplus in 1870, and miscellaneous investments during the period.

debt, then represented by the \$17,000,000 construction bonds of 1875, was a temporary expedient. Under the terms of the mortgage two million acres of land were set apart as security for the loan, and the instrument was so worded that on the completion of each sale, bonds, equal in value to the land disposed of, would be cancelled. Thus, through the operations of the Land Department, the entire loan was to be paid off not later than 1875. Various difficulties delayed the sale of the construction lands. Except in a few favored regions, transportation facilities were still poor and several million acres of government land, selling as low as \$2.50 an acre, were also on the market. By the mortgage \$8 was the lowest price for any of these lands and the company found it necessary to wait until most of the government domain had been disposed of before placing its own land on the market. The construction of the railroad in 1856 made settlement of the interior counties of Illinois much easier and by that year practically all of the government land had been sold. Tens of thousands of settlers were seeking farms near the railroad, and the company was thus in a position to demand reasonably high prices for its land. However, through legal restraints and the good judgment of the directors, the company pursued a very liberal policy. Cash payments were not required, as was the case with the federal land office. Instead, the settler could purchase his farm on credit by giving a note for the amount, the principal to be paid in five equal instalments, with interest at six per cent, the company, of course, retaining title until all payments were completed.⁸²

In 1856 active efforts were made to sell the land and nearly five hundred thousand acres were sold for upwards of four and a half million dollars. The sales in 1857 were almost as large.⁸³ Most of the sales were made to actual settlers in small holdings of one hundred to a hundred and twenty five acres, although at first a considerable quantity was disposed of to speculators. In the panic of 1857 the company experienced much difficulty with this class of purchasers, and from 1857 on it refused to sell except to *bona fide* settlers.

Up to the summer of 1857, sales were all that the company could have desired, and everything indicated a continuation of

⁸²*Land Office Pamphlets*, Illinois Central Railroad, 1856-1870. The interest per annum varied from two to six per cent, but most of the land was sold on the basis of six per cent.

⁸³Reports of the Land Office. *Annual Report*, Illinois Central Railroad, 1856, 1857.

the purchases on the same extensive scale. But just at the height of the sales, there occurred the panic of 1857 and the assignment, which, of course, put a sudden stop to immigration into the state and to further sales. Purchases dropped from \$4,500,000 in 1856 to less than \$500,000 in 1858 and to still smaller proportions in 1859.⁸⁴ More important, still, many of the farmers along the road had purchased land on credit and the panic left them unable to market their corn, wheat, and pork, or else they had no crops to market on account of repeated droughts. In many cases settlers were unable to make any payment whatever. Over a million dollars was due in both 1858 and 1859 and the purchasers had no cash to meet the instalments. To foreclose the mortgages or notes meant distress to tens of thousands of farmers and a serious impairment of revenue, through reduced acreage, to say nothing of universal ill-will. In this emergency the company followed a wise and conciliatory policy. Farms purchased by speculators or those too shiftless to succeed, were foreclosed. Where crop failures and the panic prevented payment of the instalments by *bona fide* settlers, payment in kind was allowed, generally corn. Where even this could be done, notes were extended and in other ways the farmers were encouraged to remain. Most of the settlers along the railroad took advantage of this generosity, and a large proportion of the payments due in 1858 and 1859 were extended. Altogether, over two million bushels of corn were received in payment of land notes and the officers of the company found themselves engaged in the grain business on an extensive scale. Miles of cribs were erected along the tracks and corn was held there for several months. In the end the company lost quite a large amount by handling this grain, though it was much more than compensated by the increased good will of the people along the line and by the prosperity of the farmers.⁸⁵ Its liberal policy secured it the support of the entire rural population of Illinois, and for a decade the Illinois Central Railroad was the most popular corporation in the state. It must be admitted, however, that the English shareholders viewed this generous policy with many misgivings and severely criticised the management for its liberality.⁸⁶

⁸⁴Reports of the Land Department. *Annual Report*, Illinois Central Railroad, 1858, 1859.

⁸⁵*Report of the Committee of English and Dutch Stockholders*, 1877; Fisher Report, *Railway Times*, November 27, 1858; *Annual Report*, Illinois Central Railroad, 1856-1861. This loss was borne by the Land Department.

⁸⁶*Ibid.*

Following the droughts, crop failures, and panics of 1857, 1858, and 1859, came the good times of 1860, and the sales of land again reached the proportions of 1856. The respite was only temporary, and in the spring of 1861 the great struggle between the North and South commenced. The Illinois farmer was cut off from his southern market; thousands of men entered the federal armies; and lack of a market and scarcity of labor made the year 1861 notable for its severity upon the farmers.⁸⁷ But the war created a demand for vast quantities of corn, wheat, oats and meat for the army; the eastern and New England states increased their manufacturing industries enormously, and the West was called upon to supply a part of the raw materials for these new industries and food for the men supported by them.⁸⁸ Several hundred thousand settlers took up claims or purchased farms in the western states and a considerable proportion of this immigration remained in Illinois. The demand for railroad lands grew with the immigration and in 1863 the sales of the Land Department surpassed all previous records, and, that too, at increased prices.⁸⁹ By 1864 the farmers were again in a position to pay their notes, and in that year the cash receipts of the Land Department reached the high water mark of \$1,440,000.⁹⁰

The remainder of the decade continued to be a period of unabated prosperity in which the agricultural interests of Illinois were especially favored, and the demand for farms remained good. By 1870 practically all the land north of Vandalia, and much south of that town, had been disposed of at good prices, while instalments on previous purchases had been paid promptly and in full.⁹¹ Thus, by December 31, 1870, \$13,641,616.40 had been received from construction land and \$8,800,000 more from free and interest lands, while upwards of four millions was still due the company on notes, making a grand total of considerably over \$26,000,000 received from the land grant prior to 1870.⁹²

From 1870 to 1875 the sales of new land were very small. Less than two hundred thousand acres of inferior land was sold,

⁸⁷Bogart, *Economic History of the United States*, Chap. xx. Cf. Chap. iv, where these points are taken up at much greater length.

⁸⁸Bogart, *Economic History of the United States*, Chap. xxv. Cf. Chap. iv.

⁸⁹*Annual Report*, Illinois Central Railroad, 1860-1863.

⁹⁰*Ibid.*, 1865.

⁹¹*Ibid.*, 1870.

⁹²*Ibid.*, 1870, report of the Land Department.

as compared with five times as much in the previous half decade. However, it was a period in which practically all the outstanding notes were paid off, with the result that cash receipts were large. From 1871 to 1874 \$2,304,649.87 was received in cash for sales of new land and nearly all of the unpaid notes of 1870 were liquidated.⁹³ At the close of 1874 the mortgage of September 13, 1851, was cancelled and the land grant was freed from all restrictions. The following table shows the total receipts from the land office from 1851 to 1874, inclusive:—

Construction Bond Fund.....	\$15,946,272.27	
Interest Fund	6,051,856.85	
Free Land Fund.....	3,508,488.51	\$25,506,627.63
<hr/>		
Expenses Land Office to 1873.....	1,383,644.04	
Paid Traffic Department.....	297,589.59	
Bills receivable, etc. (1874).....	75,369.90	1,754,603.53
<hr/>		
TOTAL		\$27,261,231.16
Net receipts Land Office, 1875 to 1907.....		2,219,061.66
<hr/>		
GRAND TOTAL.....		\$29,480,292.82 ⁹⁴

By 1874 approximately two million two hundred thousand acres had been sold, which made an average receipt per acre of a little over twelve dollars, including expenses, or eleven dollars net re-

⁹³Report of the Land Department. *Annual Report*, Illinois Central Railroad, 1874.

⁹⁴*Ibid.*, 1855-1907; Fisher Report, *Railway Times*, November 27, 1858; *Report of the Committee of English and Dutch Stockholders*, 1877; cf. special reports of the president, Illinois Central Railroad, 1890, 1897, 1906. In 1851 President Schuyler predicted that the land grant would be sufficient to pay the entire cost of the railroad and if the receipts of the Land Department had been applied to the capital account that prophecy would have been fulfilled.

Cost of Railroad to Dec. 31st, 1857.....	\$26,568,017.61
Receipts Land Department to 1874—net.....	25,506,627.63
<hr/>	

DIFFERENCE\$ 1,061,389.98

The value of unsold lands in 1874 was much larger than this difference. If the spirit of the mortgage of 1851 had been rigidly followed and deficit in earnings before 1863 had been made up out of surplus receipts from 1864 to 1870, the receipts of the Land Department would have sufficed to have paid back the cost of construction to 1857. However, a large part of the receipts from the land grant went directly into the treasury of the company.

ceipts. This grant of two and a half million acres of land has been a source of great profit to the company. At the same time it has been managed well, and sold to the best advantage of the community as a whole, as well as of the company.

Of the total receipts of the land office, \$11,779,407.02 to 1907, or \$9,560,355.36 to 1874, was used for the payment of interest and dividends; the cancellation of floating indebtedness, free land bonds and optional right notes; for permanent improvements defrayed from income; to purchase securities of other companies, especially the lines south of Cairo; in a word to the same purposes as the ordinary receipts from operation.⁹⁵ The remainder, amounting to \$15,946,272.27, was applied towards cancelling, in part, the construction bonds of 1875, in accordance with the mortgage of 1851. It will be seen from the report of the land department for 1872, the last full report, that \$15,103,178.59, received to that date, paid off construction bonds to the value of \$13,609,500, allowing a premium of eleven per cent, or \$1,493,678.59. In 1873 and 1874 \$657,856.47 was received, and the proportion of premium to par value was presumably about the same.⁹⁶

Since the mortgage covered \$17,000,000 and only \$14,200,000 was received from the sale of land there was a balance of approximately \$2,900,000, which came from other sources, mainly the Sterling and Currency Redemption loans. These bonds had three uses (1) to provide construction bonds for the Land Department; (2) to pay for permanent improvement chargeable to capital; (3) to substitute new bonds for the construction bonds, and to allow the sales of construction land to be used for interest and dividends.

By the terms of the construction bond mortgage, bonds had to be cancelled on the completion of every sale of land. Prior to 1861 the cash receipts from construction land were less than two and a half million dollars and sufficient bonds could be obtained in the open market on reasonable terms. So long as this condition continued the terms of the mortgage inflicted no hardship upon purchasers of land. The prosperity resulting from the Civil War allowed settlers along the railroad to pay for their farms, and, in both 1862 and 1863, there were large demands for the bonds, which naturally advanced the price of these securities. Many

⁹⁵*Annual Report, Illinois Central Railroad, 1855-1906.*

⁹⁶*Ibid., 1855-1875; Report of the Committee of English and Dutch Stockholders, 1877.*

holders saw a chance to make a profit by retaining the bonds and forcing the company to recall them at the twenty per cent advance specified in the mortgage, which again tended to advance the price. The bonds were gilt edge securities with interest payable in gold and with the general advance in prices during the period they increased in value from this cause also. To compel the settlers or the Land Department to purchase the bonds at an advance of fifteen to twenty per cent was an injustice and to remove the difficulty the directors, in 1863, issued \$2,500,000 six per cent 1st lien currency redemption bonds of 1870, with the object of purchasing construction bonds. These new bonds could be exchanged for the old on the basis of \$100 currency bonds for an equal amount of six per cent construction bonds, or \$115 of the new for \$100 seven per cent construction bonds.⁹⁷

This absorption of construction bonds in 1863 and 1864 temporarily satisfied the needs of the Land Department, but, by 1867, some \$6,441,145.37 had been received from purchasers of land and conditions were as bad as in 1863. The same remedy was applied. In 1867, sterling six per cent redemption bonds of 1875 to the amount of £500,000, or \$2,500,000, were issued and exchanged for construction bonds on about the same terms as the currency redemption bonds.⁹⁸ Both issues were easily disposed of, and, by 1870, the entire loan of \$5,000,000 had been sold for cash at par or above, or exchanged for construction bonds on the terms specified above.⁹⁹ Of the combined total approximately \$4,000,000 was used to purchase construction bonds, and, of this amount, perhaps \$750,000 was used in strict accordance with the terms of the mortgage of 1851.

When the two loans were placed it was understood that a part of the proceeds should be used to defray the cost of new equipment and improvement of the property. No figures are given by the company as to just how much was spent for this purpose, but, as shown on page 186 the approximate amount expended in this way was a million and a half. Of this perhaps a half was received from the sale of bonds for cash and the remainder by exchanging redemption bonds for construction bonds

⁹⁷*Annual Report*, Illinois Central Railroad, 1863. The six per cent currency bonds were a first class security and the few bonds sold on the open market brought \$1000 per bond. However, nearly all of the issue was exchanged for the construction bonds on the agreed terms.

⁹⁸*Ibid.*, 1867.

⁹⁹*Ibid.*, 1863-1870.

and transferring the proceeds from the Land Department to permanent improvements.

However, the greater portion of the receipts from these two issues was used in a way entirely contrary to the spirit of the construction bond mortgage. When that instrument was made in 1851, it was understood that the two million acres set apart would be sufficient to cancel the entire loan and that all the proceeds from the land would be used to retire the construction bonds. If the construction bonds were purchased through the issue of other bonds it would not be necessary to apply the receipts from the sales of land to that purpose and the money so received could be turned into the general treasury to be used for interest and dividend payments. About \$3,500,000 of the redemption bonds were used to purchase construction bonds and instead of an equal amount of receipts from the land department being credited to the Permanent Improvement account, as an offset to the new bonds, the money was turned into the Free and Interest Land account and made available for interest and dividend payments. In this way the net earnings from operation were greatly increased and the company was able to pay ten per cent dividends. Had the \$3,500,000 been applied in strict accordance with the mortgage there would have been a deficit in net earnings for the period from 1857 to 1870 of approximately \$3,250,000, instead of a surplus of \$250,000. Under the changed conditions the company could not consistently have paid the dividends it did. In other words, following a strict construction of the mortgage of 1851, the company from 1863 to 1870 was paying part of its dividends out of capital. Except for a very few years the net earnings from operation alone were never sufficient to provide for both interest and dividends. Moreover, for the thirteen years, the net earnings from operation and the receipts from the free and interest lands as originally created, were less, by some two and a quarter million dollars, than the disbursements for interest and dividends, to say nothing of expenditures for permanent improvements.¹⁰⁰

However, the course pursued was not without justification.

¹⁰⁰Reports of Land Department, *Annual Report*, Illinois Central Railroad, 1872, 1873, 1874; Fisher Report, *Railway Times*, November 7, 1858; *Report of the Committee of English and Dutch Stockholders*, 1877. Neither the company itself nor the various investigating committees make any definite statement as to where the receipts from the six per cent redemption bond issues went and for that reason the figures given above are only approximate.

Strict adherence to the mortgage would have necessitated a reduction of dividends by about two per cent a year. After the railroad was built there were no legal restrictions upon the company's use of the land grant, except those provided in the mortgage of September 13th. The other restraints were those of the company's own making and so long as the security of the bondholders was not impaired it had a perfect right to abolish such self imposed obligations. Moreover, under the circumstances, it would have been foolish for the management to have pursued an ultra-conservative policy, detrimental to the immediate interests of the shareholders, when a more liberal construction of the mortgage and the president's plan of 1851 was very profitable to the owners of the road, and did not impair the value of the property.

Aside from the objections noted above, the construction bond account was well managed, and, on the whole, was of real benefit to the railroad. At the same time, it was a rather expensive loan. For the \$17,000,000 of bonds issued there was received in cash only \$15,387,902.06 while \$18,493,678.59 was spent to retire them, allowing a difference of \$3,105,776.53, or 20.2%.¹⁰¹ Practically all the loss fell upon the seven per cent issues, and by some strange movement of chance the six per cents netted the company nearly fifty per cent more per bond than the seven per cents, although the latter were equally well secured and bore one per cent additional interest. On the other hand, the construction bond loan of the Illinois Central was far more profitable to the company than were the results of similar loans for construction purposes of such companies as the Ohio and Mississippi, St. Louis, Alton and Terre Haute, and Great Western of Illinois.

Closely connected with the operations of the Land Department and the issue of the two redemption loans was the action of the company in regard to the stock account. Prior to the assignment of 1857, as already stated, only nominal assessments were made on the share capital, most of the funds for construction coming from the sale of bonds. Then from 1858 to 1863 this policy was reversed and heavy calls were made upon the stockholders, with the result that from 1857 to 1870 \$12,880,265 was received in cash from stock assessments. This, of course, was a favorable showing. Beginning as early as 1860 the receipts from construction lands had decreased the funded debt and during the same period payments on the capital stock

¹⁰¹*Annual Report, Illinois Central Railroad, 1855-1875. Cf. Report of the Committee of English and Dutch Stockholders, 1877.*

allowed an increased investment in the property, without a corresponding increase in liabilities. By 1865 these two parallel movements brought the cost of the railroad to something like three million dollars more than the sum of all liabilities; in other words there was a surplus of that amount.¹⁰² This was a condition directly opposed to the original plan of the promoters, by which the bonds were to pay for the road and the stock was to be largely "water", and to conform to the plan of 1851 the directors from 1858 to 1863 issued \$1,772,270 of Cancelled Bond Scrip Dividends, referred to above.¹⁰³ Further reduction of the funded debt continued to take place and in 1865 a stock dividend of ten per cent. or \$2,119,930, was declared, followed in 1868 by another of eight per cent, or \$1,881,100.¹⁰⁴ According to the common meaning of the term these stock distributions constituted stock watering, because in no case did the shareholders contribute a penny directly to the company in return. Nevertheless, this action was justified from the standpoint of the shareholders and the company.

The reasons advanced for these stock dividends were as follows: (1) This \$5,764,600 was represented by an actual cash investment in the property, though received through operations of the Land Department. (2) From 1856 to 1867, the shareholders had made up annual deficits in operation, not chargeable to capital, to the extent of \$1,506,285.55, and the stock was considered a repayment of these advances. (3) Some of the shareholders for as long as twelve years and others for shorter periods, had invested money in the stock of the company, for which they had received practically no remuneration and naturally, they desired some compensation for this lost interest.¹⁰⁵ While the last two items were important, they were more than compensated for by later indirect rewards. In 1864 the stock was placed on a ten per cent basis and dividends continued at that rate for ten years. Furthermore, the stock dividends were enormously valuable. In 1863, 1865, and 1868, the lowest prices reached in August, the month in which the stock was received, were \$100, \$123, and \$143, respectively.¹⁰⁶ For the shareholder of 1862, this

¹⁰²*Annual Report*, Illinois Central Railroad, 1863.

¹⁰³*Ibid.*, 1855-1863.

¹⁰⁴*Ibid.*, 1865, 1868.

¹⁰⁵*Ibid.*, 1855-1867; Fisher Report, *Railway Times*, November 7, 1858; *Report of the Committee of English and Dutch Stockholders*, 1877.

¹⁰⁶Compare quotations on Illinois Central securities, 1860 ff.

represented a bonus of 29.6% of stock, worth \$36.30 per share at current market quotations. For all the stockholders the value of the stock dividends amounted to \$7,069,756.90, as against an alleged loss of interest of \$1,506,285.55. Further dividends and stock rights on this additional stock may be ignored as they would have accrued anyway, and the same dividend would have been distributed over a smaller number of shares. There was nothing wrong in the stock distributions, the amounts were comparatively small, and a cash equivalent had been received in each case in an indirect way, but, nevertheless, these three dividends must be regarded as contrary to the conservative policy ordinarily pursued by the Illinois Central.

The paramount purpose of the undertaking, to which stock dividends, price of stocks, or profits from the sale of the land grant were incidental, was its efficient operation as a railroad. Upon the basic fact of earnings rested the permanent financial success of the company. For the purpose of this study, the operating accounts of the railroad may be divided into seven successive classes, viz. gross earnings from operation, expenses of operation, taxes, fixed charges, net income applicable to dividends (including miscellaneous income), dividends, and surplus. Of these accounts that of gross earnings was determined mainly by the general prosperity of Illinois, that of taxes by the provisions of the charter, that of fixed charges by the original investment in the railroad, thus leaving the item of expense of operation to indicate the efficiency of management, and the items of dividends and surplus to indicate the financial wisdom of the board of directors.¹⁰⁷

The first of these accounts, i.e. gross earnings from operation, as the product of traffic carried and rates charged, was determined by the traffic conditions outlined in Chapter V, most of which were beyond the control of the management.¹⁰⁸ Moreover, the period from 1855 to 1870 was quite abnormal on account of the panic of 1857, the Civil War, the prostration of the South, the feverish industrial activity of the East, and the fact that the territory tributary to the road was just being settled.¹⁰⁹ In

¹⁰⁷Operating accounts for the period ending 1870 have been rearranged somewhat so as to conform to recent practice. No attempt, however, has been made to have them conform to the latest rulings of the I. C. C.

¹⁰⁸Cf. particularly the concluding paragraphs.

¹⁰⁹A very good present comparison is the traffic on the newly completed Canadian Northern.

the earlier part of the period, or from 1855 to about 1861, the railroad was just being put in shape for operation, and the earnings were much below normal.¹¹⁰

Commencing with the Civil War, gross earnings increased at a phenomenal rate. Not until 1871 was the company able to handle the enormous business forced upon it, and although the larger traffic necessitated increased expenses, the margin between the two grew larger insted of smaller from year to year. From a million and a half in 1855 the gross earnings from operations steadily advanced until the maximum of eight million, six hundred thousand dollars was reached in 1870. Part of this was due to increased mileage, but the receipts on the charter lines alone were seven million two hundred thousand in the final year.¹¹¹ In the first five years in which the road was in operation, the total earnings increased by approximately six hundred thousand dollars, about twenty-five per cent. This slow growth was caused by the panic of 1857 and the crop failures in succeeding years. During this time passenger earnings actually decreased.¹¹² Then, beginning with the second year of the war, and continuing until the close of the decade, there took place a remarkable traffic development, with a corresponding growth of revenue.¹¹³ In the eight years from 1862 to 1869 freight earnings grew from one million, nine hundred thousand dollars to five millions, six hundred thousand, or one hundred and ninety per cent. On the other hand, the receipts of the passenger department increased only sixty-one per cent.¹¹⁴ As a result, freight was responsible for two-thirds of the revenue in 1870, as against less than half in 1855.¹¹⁵

¹¹⁰This condition is made clear by the fact that quite a large proportion of the equipment purchased up to 1857 was not used until about 1862. Cf. *Annual Report*, Illinois Central Railroad, 1855-1862.

¹¹¹*Annual Report*, Illinois Central Railroad, 1855-1870.

¹¹²*Ibid.*, 1855-1862.

¹¹³*Ibid.*, 1862-1870.

¹¹⁴*Ibid.*, 1855-1870.

¹¹⁵The following table shows the proportion of freight, passenger, and miscellaneous revenue in years indicated:

	PERCENT 1855	PERCENT 1862	PERCENT 1870
Freight	40	54	65
Passenger	47	37	24
Miscellaneous	13	9	11

As noted in Chapter V,¹¹⁶ average rates per ton- and passenger-mile were actually higher in 1870 than in the period immediately preceding the Civil War. Passenger rates were the most peculiar in this respect and were practically twice as great in the last year of the decade as in 1857.¹¹⁷ The average freight charge on all goods was three mills per ton-mile higher in the later year than in 1859. In general, through rates declined during the period, and local rates increased, but there were important fluctuations caused by special conditions.¹¹⁸ While rates were well maintained the total number of ton- and passenger-miles more than doubled, permitting the rapid increase in revenue noted above.¹¹⁹ However, the currency inflation of the Civil War period brought about such a change in the value of money that a comparison of the years from 1862 to 1867 is almost worthless.¹²⁰ Moreover, the character of tonnage and length of haul changed from year to year, and this cause alone prevented a correct estimate of actual rate movement.¹²¹

As a result of the heavy increase in traffic during the period expenses of operation also increased, although at a somewhat slower rate than gross earnings, or from \$1,453,000 in 1856 to \$4,801,000 in 1870, (\$2200 to \$4300 per mile). However, the operating ratio, i.e. the proportion of expenses of operation to gross earnings, fluctuated greatly. Commencing at 58.9% in 1856, it rose, with the panic of the following year, to a maxi-

¹¹⁶Chap. v; see also *Annual Report*, Illinois Central Railroad, 1855-1870.

¹¹⁷*Ibid.*

¹¹⁸*Ibid.*; cf. Chap. v.

¹¹⁹*Ibid.*

¹²⁰Cf. Bogart, *Economic History of the United States*, Chap. xxiv, especially pp. 339, 340, 341; Mitchell, *History of the Greenbacks*; Fite, *Agricultural Development of the West during the Civil War*, *Quar. Jour. Econ.*, XX, 259-278; Chap. v.

¹²¹Statement of tonnage given in *Annual Report*, Illinois Central Railroad, 1855-1870. Only isolated tariffs and the average rate per ton or passenger mile are available for comparison. The influence of the inflation of the currency during the period from 1862 to 1870 is quite important. An examination of the charts in this chapter and Chapter v shows a rapid increase in all prices and charges given there, the rise being especially marked in 1864 and 1865. However, it would be unfair to assume that revenues and expenditures rose in direct proportion to the inflation of the currency in these years. Many payments were made on long term agreements, and others, such as wages, cost of fuel, etc., did not rise with the general rise of gold.

mum of 77.2%, from which point there was a gradual decline, due to increased traffic, to a minimum of 46.8% in 1862. The Civil War caused an increase to 62.9% in 1865, from which level there was another decline to 54% in 1870. On the whole the ratio of expense to earnings was less than is now considered good practice, but operating conditions at that time were so different that this low ratio was then consistent with good management. The more prominent of these differences are: (1) The volume of traffic, due largely to high rates, was only a fraction of what is now carried. This resulted in less wear and tear on equipment and roadway. (2) Wages, the most important single item in operation, were considerably lower than at present. (3) The freight and passenger service was much poorer. (4) On account of the light volume of traffic and the higher return on capital, fixed charges and dividends took a much larger proportion of earnings.¹²²

As might be expected from the light traffic of the period maintenance of way expenditures represented a much larger proportion of the total than in recent years. The total for this account rose steadily, with the exception of the years 1861 and 1862, from \$323,000 in 1856 to a maximum of \$1,632,000 in 1869 (\$1,495,000 in 1870), or from \$450 per mile in the earlier year to \$1500 per mile in 1870, with a maximum of over \$2200 in 1865. This expenditure was for a railroad that was almost entirely single track and was well built and maintained from the first. The proportion of maintenance of way to expense of operation gradually increased from 22.3% in 1856 to 36.5% in 1865, with an average of over 30%. The question of whether these expenditures did keep the roadway in good shape is discussed in a later paragraph.¹²³

Expenditures for maintenance of equipment, in marked contrast to present practice, due in part to the heavy charges for renewals and depreciation now insisted on by the Interstate Commerce Commission, were much smaller than for maintenance of way, increasing from \$278,000 in 1856 to a maximum of \$1,211,000 in 1870, or from \$442 per mile in 1857 to \$1093 in 1870. The proportion of maintenance of equipment to ex-

¹²²In reviewing expenses of operation prior to 1870 the fact must be kept constantly in mind that it was not until a much later date that modern methods of operation, with their tremendously efficient handling of traffic, were introduced.

¹²³Cf. n. 134.

penses of operation varied from a minimum of 16.5% in 1859 to a maximum of 23.9% in 1868. As might be expected, the maintenance per locomotive or car, particularly since most of the equipment was still new and much of it purchased in 1855-1857 was not used until after 1861, was much less than at present. Locomotive repairs per locomotive increased from \$800 in 1855 to \$2800 in 1870, with maximum of \$4000 in 1865; in the same years passenger car repairs per car increased from \$250 to \$900, with maximum of \$1650, and repairs to freight cars per car increased from \$35 to \$75, with maximum of \$100.¹²⁴

Expenditures for conducting transportation increased more slowly than either gross earnings or maintenance expenditures, and formed a considerably smaller proportion of expenses of operation in 1870 than in 1856. The actual expenditures increased from \$768,000 in 1856 to a maximum of \$2,038,000 in 1870, or from \$1240 per mile in 1857 to \$1840 in 1870. The proportion of conducting transportation to expenses of operation, however, decreased from 53% to 41.9% during the same years.¹²⁵ Of these totals slightly over half went for train operation, one fourth for station expenses, and the remaining fourth was divided among the other charges, including part of the traffic expense. These results, taken in connection with the large increase in traffic mentioned in Chapter V, would seem to indicate a considerable increase in operating efficiency. However, an examination of the detailed statements given in the annual reports, which lack of space prevents being printed here, shows that this is not the case.¹²⁶ Three reasons may be given to explain this apparent discrepancy: (1) Since the years from 1855 to 1862 were years of abnormally light traffic the cost of handling it was heavy in proportion to the actual amount carried. Consequently decreased costs later indicate merely a normal operating efficiency.¹²⁷ (2) Few important improvements

¹²⁴It must be remembered that these expenditures were for the very much smaller, lighter, and cheaper equipment then used.

¹²⁵This ratio is generally regarded as representing the actual efficiency of management, since maintenance expenditures are determined quite largely by external conditions.

¹²⁶According to the report of the company, although the figures for the earlier years are probably less inclusive than for the later one, the cost of train operation increased from 3.7 mills in 1859 to 9.9 mills in 1870 per passenger mile, and from 1.3 mills to 2.6 mills per ton mile.

¹²⁷As stated in Chap. IV, it was necessary to establish complete train service during the years before 1861, even though the traffic did not justify so extensive schedules.

in operating methods were introduced during the period, while from 1863 to 1870 there was a congestion of traffic not favorable to efficient operation. (3) Wages and the cost of materials advanced considerably, especially during the closing years of the Civil War. In summing up the efficiency of conducting transportation during the period it may be said that, conducting transportation took a smaller proportion of the gross earnings than at present, due, largely, to a higher class of freight; the cost of operations, per unit, i.e. train ton, or passenger mile, was also very much higher than at present; improvements in operating methods were slight and insufficient to overcome increased expenses.¹²⁸

The last item in expense of operation, i.e. general expense, varied quite decidedly from year to year, both in actual amount and in proportion to the total cost of operation.¹²⁹ The total increased from \$84,000 in 1856 to a maximum of \$257,000 in 1870, with a proportion of 5.5% and 5.9%, respectively. However, in 1861 general expenses consumed eleven per cent of operating expenses, while in 1867 it fell to only four per cent. Since this account included many miscellaneous items this wide variation is to be expected.¹³⁰

The question naturally arises, in an analysis of the various items in expense of operation, whether the expenditures were sufficient to properly maintain the railroad and to provide an adequate service. To answer these questions completely would require a presentation beyond the possibilities of this chapter, but, in general, an affirmative answer may be given to both. The matter of maintenance charges is discussed in the two following paragraphs and for the matter of service it may be said that both an analysis of the reports of the company and an examination of the publications of the time indicate that the train service, both freight and passenger, considering the railway development of the period, was reasonably adequate. From a little before 1870 until several years later, there was much

¹²⁸Cf. statements in regard to operating efficiency in the annual reports of the president, *Annual Report*, Illinois Central Railroad, 1855-1870.

¹²⁹The main items in general expense were: salaries general officers, salaries clerks, general office expense, insurance, legal expense, miscellaneous.

¹³⁰In 1861 there is an item of \$81,822 for miscellaneous, in 1868 insurance was \$48,513, and in 1869 general office expense and salaries totaled \$137,586.

complaint about the service, but this belongs to another period.¹³¹

Up to 1862 both maintenance of equipment and roadway charges were low, but this did not result in depreciation of the property. This conclusion is borne out by the following considerations: (1) Most of the equipment was from one to five years old and heavy repairs were not as necessary as later. (2) The roadway was also new and the small number of trains passing over the tracks did not wear out the rails or affect the condition of the superstructure. During these years rails, ties or bridge materials did not need replacement and labor on track was almost the only charge. Wages for efficient trackmen were low, and moderate expenditures kept the permanent way in excellent condition. (3) The traffic was abnormally light and the cars and locomotives were worked only a part of the time. In fact, a considerable proportion of the equipment purchased in 1856 and 1857 was not used until 1862 and did not require extensive repairs.¹³² Thus, the locomotive and freight car repair charges were distributed over a smaller number of units than the reports would indicate, and repairs on locomotives in actual use, considering the light service and their recent purchase, were fully as heavy as after the Civil War.¹³³

From 1863 to 1870, the road was taxed to its utmost capacity and both roadbed and equipment depreciated rapidly. The demands upon the rolling stock were so great that proper attention to repairs was impossible, and consequently, much larger expenditures were necessary when shopped. This condition was aggravated by high cost of labor and supplies. The hard service had a similar effect on superstructure, rails and ties. Moreover, beginning with the Civil War, an increasing amount of tie and rail replacement was necessary on account of a larger number of trains and natural deterioration. Despite this large in-

¹³¹From about 1871 until after 1880 the railroad was forced to retrench heavily and it is probable that conditions during that period are confused with conditions before 1870 when there was no financial necessity for curtailment in service or insufficient maintenance charges.

¹³²With the light traffic the average life of the ties, iron rails, and bridge materials used on the Illinois Central was at least ten years. As most of the track was not laid before 1854, no important replacements were necessary until about 1864 or 1865. Moreover the quality of all materials put in the road was first class and repairs were not as common as on other roads which were built with cheaper materials. Cf. Ackerman, *Early Illinois Railroads*, p. 42.

¹³³*Annual Report*, Illinois Central Railroad, 1855-1870. The cost of repairs to each locomotive is given in the annual reports.

crease in the necessary maintenance charges the expenditures were more than sufficient to keep the property in first-class condition, and the railroad was in much better working condition in 1870 than thirteen or fourteen years earlier. It is also reasonably certain that a considerable amount of money was expended on maintenance which a more conservative system of accounting would have charged to capital.¹³⁴

Taxes, with the two minor exceptions mentioned below, were confined to the payment of seven per cent of the gross earnings, as provided for in the charter. By interpretations of the courts and of the state auditor this amount was fixed as both maximum and minimum after the full payment became due with the completion of the railroad. No other taxes of any kind were assessed in Illinois. In addition, however, there was a slight federal tax on earnings and dividends under the war legislation of the government. In Iowa, the leased lines were subject to the usual state taxes, which were quite light. Up to about 1863 the seven per cent tax was a heavy burden on the company, but with increased revenues later it ceased to be burdensome.

Net earnings, over and above expenses of operation and taxes, increased rapidly, with the growth of earnings. From \$424,613 in 1858 (the net income previous to that year being carried as a capital account in this monograph) the amount rose to a maximum of \$3,429,838 in 1870. To this strictly operating income should be added miscellaneous receipts, mainly from the sale of lands. This total of gross income increased from \$581,-

¹³⁴*Annual Report*, Illinois Central Railroad, 1862-1870.

This matter of maintenance of the property is one which is involved in considerable dispute. In the report of the Delegates appointed by the committee of English and Dutch stockholders, made in 1877, and in the President's special report of 1897, it is asserted that the property was allowed to deteriorate after the Civil War. The investigating committee undoubtedly viewed the property from the English standpoint and naturally expected to have the railroad kept in better condition than it was. The report of 1897 made a contrast of conditions in the latter year with earlier periods and there was an unintentional bias against reporting the property in as good condition as it really was. Moreover, the standards of maintenance have advanced very rapidly and the property has been built up to a large extent out of maintenance expenses. Furthermore, as stated in the text, the maintenance of way and equipment charges were very heavy, considering the amount of traffic, and it is difficult to see how the property could depreciate, provided reasonable care was exercised in the disbursement of the money.

732 in the earlier year to \$4,043,705 in the later (a maximum of \$4,184,661 in 1869).

Against this gross income there was a charge for the fixed items of expenditure, i.e. interest on funded and floating debt, miscellaneous fixed charges on the bond account, and rental of leased lines. With the reduction of the funded debt interest charges steadily decreased from \$1,340,997 in 1858 to only \$622,053, in 1870, or only 18% of the gross income of the charter lines. Including rentals, the item of fixed charges amounted to \$1,194,570 in 1870, or not quite 30% of the gross income. Since nearly \$500,000 of this amount, representing the lease of the Iowa lines, was only incidental to the financial operations of the Illinois Central proper, the company was in a very strong position so far as income account was concerned. Moreover, since the bonds were bearing only six and seven per cent, while dividends were ten per cent, the fixed interest charge was in the nature of an asset, rather than a drain upon net revenues applicable to dividends.¹³⁵

The amount available for dividends and surplus, after all charges for operation, taxes, interest, and rentals had been provided for, varied from a deficit of \$759,265 in 1858 to a surplus of \$2,849,135 in 1870 (\$3,997,070 in 1869, the maximum). From 1861 on, the income was sufficient to provide for dividend payments, with a small surplus during most of the years. However, if the dividends be set off against the net income from operation, less fixed charges, i.e. omitting payments from the land account, there would have been a heavy deficit in every year. In fact, there was a deficit of \$1,908,717 in dividend payments over

¹³⁵The operation of the Iowa leased lines from 1867 to 1870 yielded a slight profit to the Illinois Central and, therefore, the rentals paid were not a liability upon the finances of the company. Aside from these rentals, the fixed liabilities of the company towards the close of the period were, as the text indicates, unimportant. They were amply covered by the receipts from the Land Department and, therefore, left the railroad practically an unencumbered asset of the stockholders. With this high security for any funded debt it became possible for the company to borrow at interest rates lower than the dividends, and from this period dates the policy of the Illinois Central of carrying a large funded debt bearing an interest rate lower than the average returns on the investment, thus permitting the payment of dividends higher than this average return. The financial strength of the company rests on its wise application of this policy.

income applicable to dividends for the period, and, had the net income from land sales not been included, as they should have been according to a strict interpretation of the mortgage, there would have been an additional deficit of over seven million dollars.¹³⁶

After 1861 there was a surplus of net earnings above fixed charges and by 1863 the amount was large enough to justify the directors in declaring a regular semi-annual, four per cent cash dividend, instead of the four per cent interest on full paid stock given before that date.¹³⁷ In 1865 the annual dividend rate was increased to ten per cent and was made payable on all stock outstanding, including the scrip distributed prior to that time.¹³⁸ This rate was continued until 1874 and was equivalent to 10.8% in 1864 and 1865; to 12% from 1866 to 1868, and to 13% from 1869 to 1874, on the actual cash invested by the shareholders.¹³⁹ During the period, the Illinois Central stock was distinctly a good investment, as evidenced by the stock quotations, which, in July, 1868, reached a high mark of 159.¹⁴⁰ Including cash and stock dividends and rights, the shareholder received from 1863 to 1870, on an investment of \$100, a return of \$106.30, equivalent to 15.18 per cent a year. Moreover, at the end of this time his stock was worth forty dollars a share more than in 1860.¹⁴¹ This certainly was a handsome return on such a safe investment.

Nor, as seen above, was there any question about the justification of these dividends from the standpoint of net

¹³⁶These statistics bring out forcefully the statement of Richard Cobden that the strength of the railroad lay in the land grant. However, the directors of the company must be criticised for their lavish use of this reserve during the years from 1863 to 1870. In the language of Wall street they were simply "cutting a melon" when a much more conservative use of the reserve formed by the land grant would have saved the company much difficulty later on. In this connection it is interesting to compare the policy of the Canadian Pacific Railroad in the use of funds obtained from its land grants.

¹³⁷*Annual Report*, Illinois Central Railroad, 1863.

¹³⁸*Ibid.*, 1865; i.e., eight per cent in 1864 and ten per cent in 1865.

¹³⁹*Ibid.*, 1863-1870; i.e., if the stockholder of record of 1862 had kept all stock distributions this would have been his return per \$100 share.

¹⁴⁰*Ibid.*; *Commercial and Financial Chronicle*, VIII, 9 (Jan. 2, 1869). This includes "rights".

¹⁴¹*Commercial and Financial Chronicle*, X, 9 (January 7, 1871).

earnings, other than distribution of land office receipts. In only one year, viz. 1866, did the dividends exceed the revenue applicable to dividends and then to only a slight extent.¹⁴² In the other years, there was no question about the ability of the company to maintain the dividend. However, the directors did not always pursue a conservative course and expenditures from 1863 to 1870 were almost too near receipts for perfect safety. In 1870, the year when net earnings were the most satisfactory, the fund applicable to dividends amounted to only 11.4% against requirements of 10.4%.¹⁴³ Omitting receipts from the land department, necessarily only a temporary source of income, the net earnings applicable to dividends ranged from 5.4% in 1866 to 8.6% in 1870.¹⁴⁴ According to the company's books, the high dividend rate was guaranteed by a large surplus, but this was merely a bookkeeping account and was not represented by available assets.¹⁴⁵ By paying, say nine per cent instead of ten per cent, a large cash surplus could have been accumulated which would have allowed a continuance of eight or nine per cent dividends over a much longer period.¹⁴⁶

Prior to 1870 the company pursued a conservative policy in regard to extensions involving any financial risk. From the completion of the road to the Civil War several traffic arrangements with connecting or branch lines were made, but in no case was the financial responsibility large. Bonds of the Ohio and Mississippi and the Peoria and Oquaka, to the extent of approximately \$100,000 each, were purchased, but were not retained for any length of time.¹⁴⁷ No other important agreements were made except with the Dubuque and Sioux City Railroad Company. As stated in Chapter IV, the Illinois Central, in 1867,

¹⁴²*Annual Report*, Illinois Central Railroad, 1866.

¹⁴³*Ibid.*, i.e., ten per cent cash dividend and about .4 per cent federal war tax. In other years the dividend and war tax were barely earned.

¹⁴⁴*Ibid.*, i.e., excluding receipts from the land department and miscellaneous sources of income.

¹⁴⁵The surplus was obtained by adding all interest payments to cost of construction and depreciation on construction and free land bonds and deducting from it net receipts to 1863. This account was not only not represented by cash assets, but was incorrect.

¹⁴⁶From 1874 to 1905 the dividends were reduced to a four to six per cent basis and the accumulation of a large surplus in 1870 might have improved this condition.

¹⁴⁷*Annual Report*, Illinois Central Railroad, 1855-1862; Fisher Report, *Railway Times*, June 19, 1858.

leased the property of the Dubuque and Sioux City and its subsidiary lines, the Iowa Falls and Sioux City and the Cedar Falls and Minnesota, for a period of twenty years.

The calendar year 1870 was the most successful year for the Illinois Central railroad to that time. Gross revenue was large, and the net earnings were sufficient to pay all fixed charges, a ten per cent dividend and provide a surplus of a quarter of a million dollars. The financial policy pursued by the company in the construction and operation of the railroad had proved entirely satisfactory to the promoters and owners of the stock. The construction work was carried on without serious financial difficulty, and after the first few years of operation the net earnings were all that could have been reasonably desired. The land grant was managed well and by 1870 had paid off most of the indebtedness. While the sanguine prospects of the promoters were not completely fulfilled, the investors in the property were amply rewarded, as illustrated by the following table:

Total cost of construction, equipment, net cash assets and supplies, Dec. 31, 1870.....		\$36,242,203.82
Funded debt (net)	\$ 6,869,500.00	
Cash paid on stock (net).....	19,726,700.00	26,596,200.00
	<hr/>	<hr/>
NET SURPLUS		\$ 9,646,003.82

At the same time the affairs of the company were handled in a conservative manner, and only a part of this surplus, not quite six million dollars, was distributed to the shareholders in stock dividends. The remainder was invested in the railroad and added to the real value of the property.

CHAPTER VII.

CONCLUSION.

The Illinois Central Railroad has always occupied a unique position among the railroads of the country. From the inception of the project it had been primarily a government enterprise. It was the first important railway project in Illinois, and for twenty years its construction was the ambition of the state and its citizens. Moreover, it was also fostered by the federal government. The first land grant ever given by Congress to assist in the construction of a railroad was given to the state of Illinois to complete this undertaking. The legislature turned over the grant to a private corporation and the Illinois Central Railroad became the first important land grant railroad. Finally, the Illinois Central was the only company of any size in the Northwest, or upper Mississippi valley that followed the lines of longitude instead of latitude. The other great transportation systems of the country, the New York Central, Baltimore and Ohio, Pennsylvania, Erie, Northwestern, Burlington, and Rock Island, extended west from the Atlantic seaboard or east from the Mississippi River. The "Central", on the other hand, was built to retain the commerce of the Mississippi valley along north and south lines.

At the same time, though in this respect the railroad was similar to most of the large roads of the West, the Illinois Central was built through territory very thinly settled and was created with the definite object of developing the otherwise dormant resources of such region. In 1850 the central counties of Illinois were undeveloped, and the railroad was constructed through that part of the state in order to provide cheap transportation for their grain and live stock. The land grant and special privileges given the company were merely the necessary inducement to private capital to take up the undertaking.

From any view point, the construction of the Illinois Central must be regarded as a success. After four successive fail-

ures by the state itself and private individuals a group of Boston and New York capitalists built the road without receiving one cent of help from the state, other than the land grant and privileges granted in the charter, and without throwing any financial liability upon the government. The financial problems connected with construction were met, and the enterprise was carried through in a more economical manner than was any other similar undertaking of the period. At the same time the promoters constructed the railroad according to the best standards of the period. When finished it was the best built road of its size in the central West. Its operation, after the first four years, was also successful and accomplished what the early advocates of the scheme desired.

This success was accompanied by direct financial benefit to the federal and state governments. By the terms of the land grant act the alternate odd numbered sections not turned over to the state were sold for not less than \$2.50 an acre, double the former price, and the government lost nothing by giving half the land away. In fact, the construction of the railroad materially hastened the sale of all lands in central Illinois. Furthermore, the Illinois Central was of almost incalculable value to the country during the Civil War. The least important service was the reduced rates for troops and army supplies. Of far greater influence was the fact that such troops and supplies could be transported at all. The railroad provided an easily guarded connection between the federal armies in the West, and the loyal states of the union. Hundreds of thousands of men and tens of thousands of tons of supplies were carried over the line and placed quickly and safely near the base of active military operations. Had it not been for the Illinois Central the vast resources of the central West could not have been placed at the disposal of the government as easily as they were, the operations of the army would have been hampered and restricted, and the ultimate success of the national cause delayed that much.

The direct influence of the railroad on the state of Illinois was also of great importance. In the charter the state wisely exacted from the company a consideration of seven per cent of the gross earnings in return for the land grant. This is almost the only instance where either the state or national governments received any immediate compensation for lands surrendered to a private corporation. The development of a system of internal transportation was the primary cause of the state debt, and, by

the foresight of the legislature, the land grant was made the means of paying off the indebtedness, but without further risk on the part of the state. It might almost be said the present Illinois Central corporation was created for the purpose of increasing state taxes.¹ The results were all that the public could have asked. Including the year 1870, the seven per cent tax on the gross earnings of the company amounted to a total of four million six hundred thousand dollars, or nearly a third of the obligations of the state when the charter was granted. The large annual receipts permitted the prompt payment of the interest and the retirement of a portion of the principal of the state debt without the imposition of heavy taxes upon the industries of the state. Moreover, the building of the road opened up to settlement thousands of farms, and the increased taxes were also an important consideration in placing the state on a good financial standing. Through the cash payments into the state treasury and the increased valuation given the property of the citizens the Illinois Central placed the state of Illinois upon a firm financial basis and made its credit as good as that of any commonwealth.

The construction of the Central meant more to Illinois than the payment of half a million dollars of taxes a year. When Lieutenant Governor Jenkins and Sidney Breese first suggested a central railway, the interior of the state from Chicago to Du Quoin and from Danville to Springfield was an unoccupied wilderness. When Colonel Mason and his engineers surveyed the route of the railroad most of this territory was still unsettled and its resources practically untouched. The important influence of the Illinois Central came in the development of this part of the state.

Twenty years later there had taken place a transformation in the interior counties of Illinois. One-fifth of the entire population of the state was living in these counties, and their products formed one-fourth of all those raised by Illinois. Slightly more than one-half the people of the state were within twenty miles of the Illinois Central, and their wealth and prosperity was equal to that of any portion of the commonwealth. Early travellers declared the prairies could never be anything but a desert, but in 1870 they were the granary of the north Atlantic states. Nor was the development of the territory tributary to

¹Personal Statement of Mr. Head, clerk of the House during the passage of the charter.

the railroad confined to material things. Towns and cities were numerous; churches, schools, and colleges were as common as in other parts of the state; and the people were prosperous and contented.²

This development of central Illinois was brought about, almost entirely, through the efforts of the Illinois Central. There were other roads through the region, but until after the close of the war their influence was slight compared with that of the "Central". Not another railroad crossed its line from Cairo to Centralia, and there were only five from La Salle south.³ Moreover, during the first ten years of the company's history the transverse lines were merely feeders for the north and south road, so far as local territory was concerned. Thus, the full credit for the development of the central counties of Illinois must be given to the Illinois Central Railroad.

Furthermore, the construction of the Illinois Central had a far-reaching influence on the growth of the country. In the sixth and seventh decades of the nineteenth century there took place an important expansion in the production of food stuffs due to the increasing demands of Europe and the eastern states. Most of this development, as shown in the preceding pages, occurred in the central West, and the Illinois Central Railroad and the country dependent upon it were the most prominent single factor in increasing the movement of western grain to the north Atlantic seaboard. Next to the Chicago, Burlington and Quincy Railroad the Illinois Central handled more wheat and corn than any other road in the West and, if the total tonnage of all grains is considered, it surpassed even that road. In the four years of the Civil War there was no other portion of the country which increased its production of grain to as great an extent as did the central counties of Illinois. By 1870 the agricultural territory directly dependent on the "Central", including the Iowa leased lines, supplied a larger share of the western grain forwarded to the Atlantic coast than any other area of similar size in the United States.

The Illinois Central was built with the definite object of building up the interior of Illinois and the results amply justified all the efforts expended in securing the road. Instead of being isolated from the leading markets and forced to be largely

²Cf. Chap. v.

³Viz., Ohio and Mississippi, Terre Haute, Alton & St. Louis, Great Western, St. Louis, Alton & Chicago and Peoria & Oquaka. Cf. Chap. iv.

self sufficing, the people in that part of the state had become an essential factor in the economic organization of the country. They were no longer self sufficient, but produced commodities, principally grain, needed by the eastern States and, in turn, consumed the manufactured goods of that section. Instead of being a drawback to the other portions of the state they occupied a leading position in its economic, as well as political and social advancement.

Thus, the construction of the Illinois Central may be regarded as the most important industrial undertaking ever commenced in the state of Illinois. The promoters of the enterprise, the investors in the securities of the company, and the men who managed its financial, traffic, and operating affairs after completion, deserve great credit for their efforts in making it an actual reality, even though they did so with the purpose of making handsome profits for themselves. At the same time, the real success of the railroad was based on the federal land grant. It was not the capital behind Robert Schuyler and the other promoters that gave the company its standing, nor was it the business ability of the directors that induced capitalists to purchase the stock and bonds of the corporation. The enormous extent of the land grant was the primary cause of the financial stability of the company. Had it not been for the land, the promoters could never have obtained the funds to build the road.

Moreover, after the enterprise was completed, it was the receipts from the land grant which kept the corporation from going into insolvency. From 1855 to 1861 there was not a year in which the net earnings from the operation of the railroad paid even the fixed interest charges. Without the receipts from the land department the railroad would have been foreclosed before it was finished. Even after 1862 the operation of the lines did not give sufficient profit to pay a regular eight per cent dividend on the actual cash invested in the stock. As a matter of fact, the average dividend for this period would have amounted to six per cent, instead of twelve, had it not been for the earnings of the land department, and there would have been no stock distributions nor surplus at the end of the period. Investors in other corporations which were managed as well as the Illinois Central were making ten and twelve per cent or even more on their actual investment, and the actual returns to the owners of the Illinois Central, so far as the operating accounts were concerned, were below a reasonable standard. In other words the land grant subsidized the railroad. It was an arrangement which

benefited both parties, and while the promoters of the Illinois Central made handsome profits on the operation of the road, the state of Illinois, its citizens, and the people of the country as a whole received equal advantages through the development of the territory near the railroad.

It is one of the ironies of the economic history of the United States that the Illinois Central Railroad, which was constructed to develop traffic along north and south lines, should be the foremost influence in changing the commerce of Illinois into east and west lines. The Civil War and the changed economic conditions following the struggle forced the company to send the grain of central Illinois to Chicago, and prevented its developing a profitable market in the south, although the former policy was clearly against its best permanent interests. As a result, the people were accustomed to ship their grain, live stock and raw materials east to the Atlantic seaboard and after the Civil War the company was unable to bring about any change. So long as the cost of carrying freight by railroad was high, and there were no strong east and west lines entering the state below Chicago, the Illinois Central did not lose much by this diversion of traffic. It obtained almost as long a haul from the central part of the state to Chicago as it would have to Cairo and the return freight was greater. Up until 1870 the east and west lines were not powerful enough to interfere with the business of the north and south trunk line and the grain traffic of the latter was reasonably profitable.

However, in the closing years of the seventh decade the trunk lines, especially the Pennsylvania, New York Central, Baltimore and Ohio, and Wabash, extended their tracks into central Illinois, and one by one they gained complete possession of the connecting and feeder lines which formerly had turned their freight to the Illinois Central. The latter company, instead of seeking to retain them even to the extent of purchase or lease, pursued the ultra-conservative course of neglecting them entirely. Thus, the company was practically isolated in 1870 and did not have an important connecting or branch line directly under its control.

As a result of the changed conditions in the movement of grain and the expansion of the east and west railroads the Illinois Central was gradually being forced into an awkward position. Its natural business along north and south lines was hampered and almost destroyed by the prostration of the South. The traffic which it had built up from central Illinois to Chicago was being

cut into by east and west railroads, which were each year becoming better able to compete with their rivals. Finally, the branch and connecting lines dependent upon it were now being purchased or leased by strong companies whose interests were diametrically opposed to those of the Illinois corporation. By 1870 these forces opposed to the Illinois Central had not made themselves evident, but they were steadily gaining strength and placing themselves in a better position for the conflict. On the other hand, the Illinois Central neglected to better its position and allowed important connections to slip from its control. When the conflict did break out the latter company was unprepared and suffered accordingly. Thus, the year 1870 represents the high tide of prosperity for the Illinois Central Railroad, and not again for some thirty-five years did it hold as strong a position from the financial and traffic standpoint.

APPENDIX.

LAND GRANT ACT OF SEPTEMBER 20TH, 1850.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled:

That the right of way through the public lands be, and the same is hereby, granted to the State of Illinois for the construction of a railroad from the southern terminus of the Illinois and Michigan Canal to a point at or near the junction of the Ohio and Mississippi rivers, with a branch of the same to Chicago, on Lake Michigan, and another via the town of Galena, in said State, to Dubuque, in the state of Iowa, with the right also to take necessary materials of earth, stones, timber, etc., for the construction thereof: Provided, that the right of way shall not exceed 100 feet on each side of the length thereof, and a copy of the survey of said road and branches made under the direction of the Legislature, shall be forwarded to the proper local land officers, respectively, and to the general land office at Washington city, within ninety days after the completion of the same.

Sec. 2. And be it further enacted, That there be, and is here granted to the State of Illinois, for the purpose of aiding in making the railroad and branches aforesaid, every alternate section of land designated by even numbers, for six sections in width on each side of said road and branches; but in case it shall appear that the United States have, when the line or route of said road and branches is definitely located by the authority aforesaid, sold any part of any section hereby granted, or that the right of preemption has attached to the same, then it shall be lawful for any agent or agents to be appointed by the Governor of said State, to select, subject to the approval aforesaid, from the lands of the United States most contiguous to the tier of sections above specified, so much land in alternate sections, or parts of sections, as shall be equal to such lands as the United States have sold, or to which the right of preemption has attached as aforesaid, which lands being equal in quantity to one-half of six sections in width on each side of said road and branches, the

State of Illinois shall have and hold to and for the use and purposes aforesaid: Provided, that the lands to be so located shall in no case be further than fifteen miles from the line of the road: And, further provided, the construction of said road shall be commenced at its southern terminus, at or near the junction of the Ohio and Mississippi rivers, and its northern terminus upon the Illinois and Michigan Canal, simultaneously, and continued from each of said points until completed, when said branch roads shall be constructed, according to the survey and location thereof: Provided further, that the lands here granted shall be applied to the construction of said road and branches, respectively, in quantities corresponding with the grant for each, and shall be disposed of only as the work progresses, and shall be applied to no other purpose whatsoever: And provided, further, that any and all lands reserved to the United States by the Act entitled "An Act to grant a quantity of land to the State of Illinois, for the purpose of aiding in opening a canal to connect the waters of the Illinois river with those of Lake Michigan" approved March second, eighteen hundred and twenty-seven, be, and the same are hereby reserved to the United States from the operation of this Act.

Sec. 3. And be it further enacted, That the sections and parts of sections of land which, by such grant, shall remain to the United States within six miles on each side of said road and branches, shall not be sold for less than double the minimum price of the public lands when sold.

Sec. 4. And be it further enacted, That the said lands hereby granted to the said State shall be subject to the disposal of the Legislature thereof, for the purposes aforesaid and no other; and the said railroad and branches shall be and remain a public highway, for the use of the Government of the United States, free from toll or other charge upon the transportation of any property or troops of the United States.

Sec. 5. And be it further enacted, That if the railroad shall not be completed within ten years, the said State of Illinois shall be bound to pay to the United States the amount which may be received upon the sale of any part of said lands by said State, the title to the residue of said lands shall reinvest in the United States, to have and hold the same in the same manner as if this Act had not been passed.

Sec. 6. And be it further enacted, That the United States mail shall at all times be transported on the said railroad under

the direction of the Post Office Department, at such price as the Congress may by law direct.

Sec. 7. And be it further enacted, That in order to aid in the continuation of said Central Railroad from the mouth of the Ohio river to the city of Mobile, all the rights, privileges, and liabilities hereinbefore conferred on the State of Illinois shall be granted to the states of Alabama and Mississippi respectively, for the purpose of aiding in the construction of a railroad from said city of Mobile to a point near the mouth of the Ohio River, and that public lands of the United States, to the same extent, in proportion to the length of the road, on the same terms, limitations, and restrictions in every respect, shall be, and is hereby, granted to said states of Alabama and Mississippi respectively.

MEMORIAL OF DECEMBER 28TH, 1850.

To the honorable the Senators and Representatives of the people of Illinois in General Assembly convened:

The memorial of Robert Schuyler, George Griswold, Gouverneur Morris, Jonathan Sturges, Thomas W. Ludlow, and John F. A. Sandford of the City of New York; and David A. Neal, Franklin Haven and Robert Rantoul, Jun., of the City of Boston and vicinity, respectfully represents:

That having examined and considered an act of Congress of the United States, whereby land is donated by the United States for the purpose of insuring the construction of a railroad from Cairo, at the mouth of the Ohio River, to Galena and the north-western angle of the State of Illinois, with a branch extending to Chicago on Lake Michigan, on certain conditions, therein expressed; and having also examined the resources of the tract of country through which it is proposed that the said railroad shall pass, and the amount of cost, and the space of time necessary for constructing the same, the subscribers propose to form a company, with such others as they may associate with them, including among their number persons of large experience in the construction of several of the principal railroads of the United States, and of means and credit sufficient to place beyond doubt their ability to perform what they hereinafter propose, make the following offer to the State of Illinois for their consideration:

The company so formed by the subscribers will, under the authority and direction of the State of Illinois, fully and faithfully perform the several conditions, and execute the trusts, in the said act of Congress contained. And will build a railroad

with branches between the termini set forth in said act, with a single track, and complete the same, ready for the transportation of merchandise and passengers, on or before the fourth day of July, which will be in the year of our Lord eighteen hundred and fifty-four. And the said railroad shall be, in all respects, as well and thoroughly built as the railroad running from Boston to Albany, with such improvements thereon as experience has shown to be desirable and expedient, and shall be equipped in a manner suitable to the business to be accommodated thereby. And the said company, from and after the completion of the said road, will pay to the State of Illinois, annually — per cent of the gross earnings of the said railroad, without deduction or charge for expenses, or for any other matter or cause; provided, that the State of Illinois will grant to the subscribers a charter of incorporation, with terms mutually advantageous with powers and limitations, as they, in their wisdom, may think fit, as shall be accepted by said company, and as will sufficiently remunerate the subscribers for their care, labor, and expenditure in that behalf incurred, and will enable them to avail themselves of the lands donated by the said act to raise the funds, or some portion of the funds, necessary for the construction and equipment of said railroad.

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Abbreviations :— C H, Chicago Historical Library; I C, Illinois Central Library, Chicago, Ill.; U I, University of Illinois Library; W H, Wisconsin State Historical Library; U C, University of Chicago Library; C P, Chicago Public Library; I H, Illinois State Historical Library, Springfield, Ill.

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PUBLICATIONS OF THE ILLINOIS CENTRAL RAILROAD COMPANY.

Annual Report of the President to the Directors for the year ending December 31, 1855. Gives itemized cost of construction to date. [U.I., C.H.]

Annual Report of the Directors and President to the stockholders for calendar years, 1856 to 1870, inclusive. These reports are very full and contain a great mass of detailed information relating to the traffic and financial history of the company. Except for occasional misprints and certain mistakes in accounting the statements are entirely correct. [C.H., I.C.]

Annual Report of the Directors to the stockholders for calendar and fiscal years, 1871 to 1907, inclusive. Contain considerable detailed material, but not as much as in the earlier reports. With a few exceptions statements and statistics are perfectly correct and no attempt is made to misrepresent affairs. [U.C., I.C.]

Special Reports of the President to the Directors and Stockholders, 1890, 1897, 1906, October 30, 1895, December 19, 1895, January 11, 1896. Contain considerable miscellaneous information. The report for 1897 is especially valuable as it contains resumés of operating conditions, etc., before 1887. [Reports of 1897, U.C.; Reports of 1895, 1896, W.H.; all, I.C.]

Land Pamphlets, 1855 to 1870 (two or three missing). These are pamphlets issued by the Land Department soliciting immigration into the state of Illinois. There is some important information, but most of the statistics are worthless. [C.H.]

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PUBLISHED QUARTERLY
BY
THE UNIVERSITY OF ILLINOIS

VOLUME IV

URBANA, ILL.
1915

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